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COUNTRY HOUSES—HINTS ON COLOR.

The choice of color for country requires the exercise of taste, judgment and an eye for harmonious combinations. Keeping always in view the general effect, when the fancy begins to range beyond the safe line of the neutral tints, the field for error is so large that the house may be—as we have known certain houses to be—of all the colors of the rainbow, before the decorative portions of it were finished.— Before the building is finished, the whole subject of color should be carefully considered. Afterwards as the eye becomes to the incongruity the necessary changes become more difficult to make. It is almost impossible to give a correct idea of colors in painting without presenting their different tints and degrees of shading to the eye. When we learn the well known white, black, red, &c, there are so many variations of particular colors that description is apt to fail in conveying to the reader the exact color which is in the thought of the writer. There are very few persons who have had the means of acquiring a knowledge of the different shades of color, or of the method of combining colors so as to produce the neutral which may be desired. Such knowledge is nevertheless well worth taking some trouble to obtain, and any one who wishes to have his dwelling painted in a manner to give him future satisfaction, would do well to specify, as nearly as possible, the colors he wants, have minute quantities combined of various shades approximating most closely to his idea, and from these sample colors make his final selection. It will not do, of course, to fix upon a particular body color, however much it may please the taste without having due regard to the situation, the surroundings, and the style of building. The lighter colors which are suitable to cottages, and the smaller class of farm houses will not look so well applied to more imposing structures

It is laid down as a rule, by Calvert Vaux, that every building requires four tints to make it a pleasant object in the way of color. "The main walls," he remarks, "should be of some agreeable shade of color,

the roof trimmings, verandahs and other wood work, being either of a different color or of a different shade of the same color, so that a contrast, but not a sharp one, may be established—a third and fourth color not widely different from the other wood work, should be applied to the windows, blinds, &c."

The greatest defect in the generality of country buildings is the too frequent use of white. It is true, that white reflects the rays of the sun, instead of absorbing them, and is therefore a good preservative of weather-boarding. It is true also that the materials of white are cheap. This relates however only to washes of lime, and not to white lead, or zinc white, mixed with oils and their combinations—under any circumstances unless the building is heavily embowered in shrubbery and shade trees, white as a color is extremely objectionable—where deep shadows are flung over the house from the embowering foliage in the summer season, the objection to white is partially removed, but when the leaves fall the objection returns with double force—a delicate cream color will, on the other hand, soften the glare of white, and may in many cases be used to advantage. Equally to be avoided, in the country, is an unmodified red, or those brown stone tints approaching to chocolate color which are so frequently used in the construction of town houses, neither of these colors harmonize with the landscape. In the midst of green trees and green fields they become sombre and forbidding, and their gloomy aspect cannot even be relieved by flowers or running vines.

Take again, those bright red brick houses which are sometimes met with, or bear in mind the red barns of the German settlers in Pennsylvania, and their ugliness as blotches on the landscape are at once apparent. With an old brick building, time worn and mossy, the case is different, for it has become gradually assimilated, to some extent at least, with its surroundings; but as Allen says: "There can be nothing less comporting with the simplicity of rural scenery than a flaming red on a building. It connects with nothing natural about it. It neither fades into any surrounding shade of soil or vegetation, and must of necessity stand out in its

own bold and unshrouded impudence—a perfect Ishmael in color, and a perversion of everything harmonious in the design.”

We turn now to the neutral tints, such as the drabs, fawns, greys and their combinations. There is here a great variety of choices, some of the colors being warm and others cool, and the use of either will depend upon the situation and the amount of shade about the house. And here we lay it down as a rule that whatever the color of the body of the house may be, the window facings, blinds, bracketings and often the roof admit of tasteful variation. Downing remarks that different shades of color applied to the trimmings of the house “confer the same kind of expression on it that the eyes, eyebrows, lips, &c., do upon the human countenance. To paint the whole house drab, for instance, gives very much the same dull and insipid effect that colorless features—white hair, pale eye-brows, lips, &c.—do the face. A certain sprightliness is therefore always bestowed on a dwelling in a neutral tint by painting the bolder projecting features of a different shade. The simplest practical rule that we can suggest for effecting this in the most satisfactory and agreeable manner is the following:—Choose paint of some neutral tint that is quite satisfactory, and let the facings of the windows, cornices, &c., be painted several shades darker of the same color.”

And here we pause, trusting that these suggestions may prove profitable to our readers.

**CULTURE OF WATER-MELONS.**—A correspondent of the *Southern Cultivator*, who has been very successful for many years growing water-melons, gives the following directions for raising them :

“Take a soil that is comparatively new, or that has lain without cultivation for several years—the poorest sandy hill you have; break it in the Fall and again in the Spring; lay off each way 15 feet apart, with a bull tongue or shovel, take well rotted stable manure and put at each crossing, three long-handled shovel-fulls; then take well-rotted chip manure and put two shovel-fulls; now walk round and round with a hilling hoe, and draw the earth up, and incorporate well with the manure leaving the hill nearly level with the surface of the ground—cultivate with anything to keep the ground clear.”

Joseph Hoopes (President of the Pennsylvania Horticultural Society), writes to the *Gardeners' Monthly* that in his trip to the Pacific, he found an excellent fruit region at Salt Lake City. The peaches were mostly seedlings, many fine varieties of clingstones, unknown at the East. The grapes were all exotics, large and handsome, but not of best quality. No destructive insects, were seen; not a single curculio mark.

## ON TREES FOR ORNAMENTAL PURPOSES—EVERGREENS.

Some of the finest essays of the late Mr. Downing were those which treated of trees for ornamental purposes. His thorough knowledge as a horticulturist gave him a great advantage in this respect, and he also profited largely by the excellent, but too much neglected, works of Michaux in his descriptions of the growth, development and characteristics of trees that are indigenous to the North American continent. Downing was an enthusiastic lover of trees, and in that sort of landscape gardening which treats of the disposition of trees, both deciduous and evergreen, and of flowering shrubs, his taste was excellent. We doubt if he was capable of appreciating the full effects of landscape gardening on a grand scale, and even in his plans for laying out the grounds of the Smithsonian Institute he committed some mistakes. One, in which he introduced a fountain on the grounds in full view of the broad waters of the Potomac was especially notable. But in spite of these short-comings he did more to refine the popular taste in such matters and in cultivating a love of the beautiful in nature than any other American writer.

In one respect he was pre-eminently judicious, and this was in earnestly advocating a free use of evergreens in the ornamentation of the homestead, however humble that homestead may be. There is nothing that gives so complete a home look to the country dwelling. Nothing clothes it and at the same time shelters it like groups of evergreens. In the summer, mixed with deciduous trees, they give a grateful shade whilst combining their darker tints of green with the lovelier greens of trees that shed their leaves in autumn. In winter, when all else is bare they give a summer aspect to the place. The eye rests on the dark green masses with delight, and their usefulness is not less than their decorative beauty, for if properly disposed they protect the house from the force of the north and northwest winds, and thus add to the comfort of the inmates.

On small places it is a mistake to plant large growing trees of any sort. In lawns and grounds of limited extent only low growing evergreens and flowering shrubs are admissible, or if larger deciduous trees are used at all, they should be very sparingly introduced, and principally at the sides and to the rear of the dwelling. To get the fullest effect from evergreens and shrubs they should be grown in masses, with breaks or openings between them, so that from the windows of the house the eye may range unobstructed along the vistas thus formed, and catch glimpses of the landscape beyond. The heaviest and compactest masses should be at the sides of the house, the evergreens in front being



disposed in irregular groups, connected with each other by smaller groups and single specimens.—Where the place is small, the approach to the house should never be in a straight line, as this destroys the effect of the grouping, and gives a stiffness and formality to the groups which no skill on the part of the improver can obviate. Again, the great masses at the wings of the house should be pyramidal in form, the taller growing evergreens occupying the centre of the mass, else the low growing shrubs should be planted in front and backed by the taller ones. In either case the effect is good, but the pyramidal form is to be preferred.

It is a mistake with many improvers that they plant too closely. Only where a tangled or dense mass is required is close planting to be recommended. Even in such cases also a proper calculation should be made for the subsequent growth of the shrubs and evergreens so planted. In groups and on the open lawn abundant room should be allowed for the evergreens to spread, and thus develop their natural beauty of form. They should never be trimmed, but their branches should be allowed to spread broadly over the ground and taper gracefully upwards. Whilst in the earlier stages of their growth the ground beneath them should be kept loose to the extent of the sweep of their branches, as rank growing grass will either kill the lower limbs entirely, or will render them ragged looking and scant of leaves, and thus destroy their beauty. Flowering shrubs should be treated with similar care, but these, unlike evergreens, require occasional trimming back to thicken them, and the removal of suckers. We do not, however, propose to put on paper at this time any minute details concerning the planting of ornamental trees and shrubs. These we defer until we take up the subject in detail.—What we now say is merely as an introduction to an interesting subject, and by a few desultory remarks to point out how much of the taste and refinement and even comfort of a country home depends on the nature of its surroundings. One important suggestion we venture here to make. In planting evergreens or flowering shrubs in groups along a walk, or singly, especial care should be taken to plant them well back from the border.—They will look too far off at first, but year by year as they spread their branches they will approach nearer and nearer the walk until, if judiciously planted, they will touch its edge without overlapping it. We throw out this hint now because we have seen many evergreens injured by cutting them back because planted too close to the walk or drive in the first instance, and because this is an error into which amateur improvers are especially apt to fall.

## Our Agricultural Calendar.

### Farm Work for May.

Work on the farm now requires to be pushed forward with all possible despatch. Much, indeed, of the preparatory work ought already to have been accomplished. But the spring season did not open favorably, and many things may have been delayed in consequence. Wherever such has been the case no time should be lost now. The manure for the corn land should be carried out and spread freshly before the ploughs, which should be kept running incessantly wherever extra teams can be spared for hauling purposes, and the harrows should follow the plough as speedily as possible. Nothing is more essential to the perfection of farming operations than that each portion of the work to be done shall follow closely on the heels of the other, and the earth dealt with in its freshest state. If some time elapses on stiff soil, after ploughing, before the harrowing commences, the clods are apt to harden and bake, and extra trouble is occasioned thereby, whereas when the harrow passes over newly turned soil it divides the adhering particles which form the clods thrown out by the plough with perfect ease. Moreover as soon as the soil is broken up chemical action commences, and this is further stimulated by the immediate use of the harrow. Apart from this, that work is best done which is done quickly, and at the same time conscientiously and thoroughly, and good work shows its effects all through the growing season. For corn, especially, it cannot be too often repeated, that deep ploughing wherever the nature of the subsoil will justify it, thorough harrowing and liberal manuring are the three great essentials to success. But of this we propose to speak presently, and so proceed to offer suggestions for the farm work for the month:

#### Planting of Corn.

We entered so fully into the cultivation of corn in an article published in the *Farmer* for last month, that further details on the subject would be superfluous. We then showed by analyses what constituents entered into the composition of the grain and stalk and leaves of corn, and what it was necessary to restore to a partially exhausted soil to furnish the proper plant food for this the noblest of cereals. We propose however, to recapitulate the principal points.

*As to the Soil.*—Rich, loamy soils, bottom and alluvial lands in which there is a large admixture of sand, and also meadow lands newly broken up from the sod are best adapted to the growth of corn.—The principal consideration is that the land should either be naturally fertile or should be made so by

the application of manures. The soil cannot be too rich for corn, which is not only a gross feeder, but grows so rapidly that the food which it requires must not only be in abundance, but must also be in its most soluble condition. Where corn is grown upon clays or clay loams, they require to be kept in the finest possible condition, every clod being reduced and the pulverization thorough. Indeed no corn will thrive well unless the soil is kept as loose as an ash-heap all through the growing season, and the reason of this is that both air and rain should penetrate the soil freely, and thus act as stimulants to the rapid and continuous growth of the plants.

**Fertilizers—The Constituents of Corn.**—As we pointed out in the article already referred to, the ash of corn abounds in potash, soda and the phosphates. Lime and magnesia are also essential, but in lesser quantity. But potash and bone earth and soda are indispensable, and these constituents are exactly those of which the soil, which has been long under cultivation, is exhausted sooner than any other. Stable manure when liberally applied will furnish them, and especially when mixed with wood ashes. So also will the better kinds of commercial fertilizers, but the former, where it can be had in sufficient quantity, is preferable, because its effects are more lasting. The quantity of phosphatic guano or super-phosphate required will depend on the quality of the soil, but not less than two hundred and fifty pounds to the acre should be applied where a heavy yield of corn is required.

**As to Ploughing.**—Deep ploughing and thorough cultivation are absolutely essential to the growth of corn. The tillage should be as perfect as possible, and should be continued at short intervals from the time the plant is three inches high until the tassels begin to shoot. If the surface of the soil is disposed to bake and harden after heavy rains, the cultivator and shovel plough must be brought at once into requisition to open once more the pores of the soil, and allow a free circulation of air.

#### Oats.

Properly speaking, it is too late even in the early part of this month to put in oats—at the best, after the hot weather sets in only a short crop can be expected. Nevertheless, in low moist lands, inclining to clay, a crop may yet be grown, but nothing short of necessity should induce the judicious farmer to put in his oat crop so late in the season.

#### Pumpkins.

Where the corn land is very rich pumpkins may be grown among the corn. A much better plan, however, is to set apart an acre or two expressly for pumpkins, and grow them in hills some twelve feet distant from each other, putting two heaping shovelfull of rich manure into each hill, covering

it with fine soil before planting, and keeping the tops of the hills flat or rather dish shaped throughout the growing season. The after cultivation is the same as for corn.

#### Millet.

Wherever the hay crop promises to be short, millet will be found a good substitute. It yields heavily on good soils, is very nutritious, and the only objection to it is the shattering of the seed.

**As to Soil.**—The best soil for millet is a corn soil—that is to say, a deep, sandy loam. Any soil, however, which does not contain an excess of clay will grow good millet.

**Time of Sowing.**—Early in May.

**Quantity of Seed to the Acre.**—For hay only one bushel of seed; for hay and seed, half a bushel to the acre.

**Time of Harvest.**—Begin to cut as soon as the seed commences to turn yellow.

**Mode of Curing.**—The same as clover.

#### Canteleupes, Musk and Water Melons.

Plant these in hills as early in the month as possible. Plant each kind separately and at a considerable distance from each other, or the pollen will mix. The hills for water melons should not be less than six feet apart, and for canteleupes four feet.—Put rich manure in the hills before planting in both instances. The finest melons we ever saw were grown on hog manure, half a bushel of which was applied to each hill. But any rich manure will answer, provided it be not too fresh.

#### Field Peas and Beans.

These should be planted early this month.

#### Root Crops.

Carrots, parsnips, beets and mangold wurtzel should have been planted a month ago. They may, however, be still seeded to advantage. For the best mode of culture we refer to the April number of the *Farmer*.

#### Broadcast Corn for Soiling.

For soiling cattle there are few crops more valuable than that of corn sown broadcast and harvested in good condition. On rich land the yield is very large, and it can be cultivated so as to be ready for the use of stock within six or eight weeks from the time of planting. Sow at the rate of four bushels to the acre.

#### Sweet Potatoes.

Get these in as early as possible. For further particulars see Garden Work.

#### Harvesting Clover.

To harvest clover in its best state it should be cut as soon as the blossom begins to turn brown.

Rolling a corn-field crosswise the rows is said to destroy the cut-worms.



## Garden Work for May.

We have often before made the same remark, but we repeat it again with emphasis, that a good vegetable garden is a prime necessity in the country. In towns and cities, those who make it their special business from the fact that vegetable gardening is a profitable occupation, keep the markets well supplied. It is nevertheless a singular fact, that outside of the market gardens the supply of vegetables raised in private country families almost invariably comes in late, and in many instances is inadequate to the wants of the household. There cannot be a greater mistake than to neglect the garden. From the commencement of Spring throughout the whole of the summer season, a free use of vegetables is absolutely essential to health. In this country too much meat is invariably eaten, and much of it in salted form. This predisposes to fevers. Vegetables are cooling and anti-scorbutic. They assist materially in forming pure blood and in keeping the system in good condition. We are clearly of opinion that in our hot summer climate, vegetables in which we include salads of all sorts—are indispensable to health, and thus they should be freely used whilst the quantity of meat, and especially of salted meat, should be greatly reduced—with these remarks we proceed to indicate the work to be done in the garden this month.

*Water Melons, Canteleupes and Musk Melons.*—The best soil for these cooling and delicious fruits is a rich loam, in which sand predominates. It should be spaded deeply and thoroughly stirred.—The hills for water melons should be made six feet apart each way, and in each hill a bushel of rich well rotted stable manure, or of hog manure, which is the best of all, should be deposited. Cover this with three inches of soil, make the hill flat on the top, and plant at least three seed to each hill. The same process may be used with musk melons and canteleupes although the hills for these need not be more than four feet apart, whilst the quantity of manure required is less than for melons. Plant each kind, sufficiently distant from each to permit the pollen from mixing.

*Cymbilins, (Squashes.)*—Prepare the ground early this month, and plant a small patch of cymbilins, four feet apart. The bush cymbilins is best, and the cultivation is the same as for corn.

*Cucumbers.*—Plant cucumbers also on hills during the early part of this month, and at the same distance apart as for cymbilins. The after cultivation is similar to that for cymbilins in every respect. To throw the vines when strong enough into fruit, pinch off the terminal shoots.

*Sweet Potatoes.*—Where sweet potatoes are grown in field culture, as is frequently the case, there is no necessity for repeating the cultivation in the garden. But when they have not been planted in the field a good supply should be provided for in the garden. The soil best adapted to the sweet potato is a deep sandy loam. The bed should face the south, and the hills or drills heavily manured. The best mode of raising sweet potatoes is to plant the sets in a hot-bed, or in a warm border, and prick them out as they grow large enough to where they are to stand until the crop matures.

*Early Corn.*—Corn for roasting ears should be planted as early in the month as the season will admit. If the garden has a warm exposure and is well protected from north and northwest winds, it would have been better to have commenced planting two weeks earlier.

*Setting out Cabbage Plants, Cauliflower and Broccoli.*—Choose a moist cloudy day in setting out these plants. If the weather is bright, shade them for a few days, and it continues dry, water the plants occasionally after sunset.

*Garden Peas.*—Prepare and then bed for garden peas and sow at intervals of two weeks for succession. The marrowfat is one of the best of the late kinds.

*Bunch Beans.*—Plant bunch beans in drills for the main crop early in this month.

*Lima and Carolina Beans.*—Plant these in hills well manured, six feet apart, and whenever it is possible, choose a light, rich sandy soil. Get them into the ground as soon as it is warm enough to plant melons.

[For a small family it has been recommended to take a few kegs, such as nail kegs, made nearly water-tight, put a few holes in the sides of each keg about an inch from the bottom, dig deeply a space of three feet in diameter, set each keg in the centre of it filled nearly full of good stable manure closely and firmly packed, pour in water as much as the manure will absorb, and repeat the supply once a week. Plant the lima beans six inches apart all around the outsides of the keg, and support the plants as they grow strong with poles, in a circle round the keg, let the tops meet over it, a few hills it is said planted in this way will be found sufficient for a family.]

*Celery.*—If the celery plants have been planted in a hot-bed they may now be set out.

*Carrots, Parsnips and Beets.*—These should now be planted, if this necessary work has not been done earlier. For suggestions in respect to cultivation, see *Maryland Farmer* for April.

*Spinach.*—Prepare bed for spinach, make the soil very rich and sow at intervals of ten days, during this month.

**Onions.**—Weed and thin out onions so that the bulbs shall stand three inches apart. Keep the soil clean and light, but do not cover the bulbs.

**Turnips.**—Thin out early turnips or sow the seed for a crop at any time, up to the 10th of the month.

**Peppers.**—Sow peppers in a bed during the first week in the month, for picking out as soon as the plants are large enough.

**Okra, (Gumbo.)**—Drill in as early as possible the seed for the main crop of Okra. Choose a moist rich soil for this crop, and water occasionally after sunset in dry weather.

**Egg Plants, Tomatoes.**—Plants seeded in a hot-bed may now be set out. If a bed in the open air has not been prepared the work may now be done and the seed sown.

**Salsify or Vegetable Oyster.**—Drill in a few rows of this fine root. Let the ground be moderately rich, and avoid the use of long manure.

**Endive.**—Sow the seed of these for an early crop.

**Flower Seeds.**—Sow annual and biennial flower seeds during the early part of this month. In dry seasons water freely, but always of an evening, and after the sun has gone down.

#### The Use of Peas as a Renovator vs. Clover.

In a practice of years, I have found both peas and red clover good renovators of a worn-out soil; but their action is, perhaps, not generally understood, or, perhaps, I don't understand it. However, here is my item: I sow peas on poor land in spring; when they are one foot high, and just as they commence to flower, I plow them under and sow again, and when the second crop of vines attains bloom, and the peas are half grown, I again turn under with the plow. By this, inasmuch as the pea gains much of its food from the atmosphere, while, at the same time, it penetrates its coarse, strong roots deep into the soil in search of additional food, the gain is a large amount of vegetable matter to mingle with the surface soil, and deepen aeration, and correspondingly give heat and aid chemical action by means of the root punctures.

In the use of clover, we are first constrained to the use of a certain amount of plaster of Paris, which, by its components dissolving and mingling in the soil, get loose, and change the elements therein, and, in so doing, give aid and vitality to the clover, which, as it penetrates deeply, takes up from below a certain amount of phosphate and potash and conveys them into the stalk ready to form seed, which ensues about the middle of September, supposing the seed to have been sown in March or early April. This crop plowed under in September gives vegetable matter in the surface, deepens and aerates the soil, and, at the same time, it has drawn from below and deposited in its stalks, which I now call vegetable matter, a certain amount of potash, etc., that without its agency would otherwise have lain dormant, or beyond the communicating action of beneficial growth agents.—*Journal of Agriculture.*

#### When Ought Lime to be Applied?

Upon this question there seems to be a wide difference of opinion even among our practical men. In answering the above question there are several important items in the action of lime which we should keep in view. Lime will hasten the decomposition of inert inorganic matter. This fact would lead us to suppose that it should be applied to the sod before it is turned under for corn, for at no other time does the soil contain so much organic material which must be decomposed before it can benefit our crops. I know that various learned and wise authorities may and have been quoted to prove that lime does not hasten the decay of vegetable matter. MORROX, in his work on Soils, uses the following language: "Writers on agriculture have stated that lime hastens the decay of vegetable matter—whereas the fact is, that it retards the process of the decomposition of vegetable matter." If lime is mixed with long dry straw, it will preserve it for an indefinite length of time; but when the same straw is mixed with earth and a portion of lime incorporated with the pile, it will increase the rapidity of the decomposition.

Another important item to remember is, that lime drives off ammonia from partially decayed and fermenting manures. From this it would seem that lime should be applied only several years after or before an application of manure.

It is true that fresh lime may be used with advantage in a compost heap with fresh manure, provided enough earth is added to absorb the ammonia so liberated. To convince any one that lime will expel ammonia, it is only needful to mix a small proportion with guano or other manure rich in ammonia, and it will soon be evident enough to convince even the most dubious.

Another very evident point is, that lime requires some time to act, and of course it should be applied some time before it is expected to act on the crop. The time which must elapse before this action begins, seems to vary very much with the lime from different quarries;—from some it seems to act almost as quickly as manure, and from others it requires several months before its action can be seen.

After several years experience and experiment, I am satisfied that the best time for me to apply lime is, on the sod the fall before ploughing for the corn crop in Chester County.—*Cor. Practical Farmer.*

Those who think our cultivated lands must grow poor as they grow old, will find food for reflection in the fact that not many years back, the average yield of wheat per acre in England was about ten bushels—it is now over thirty bushels. Brains accomplished it.



## HEDGING--OSAGE ORANGE.

## PREPARING THE GROUND AND SETTING THE PLANTS.

The ground for the hedge-row should be broken up ten or fifteen inches deep, and ten or twelve feet wide, with the common plow and sub-soil plow.—If the land is in grass or otherwise foul, the plowing should be done in the fall, repeated in the spring, and rolled and harrowed fine, leaving the surface slightly rounding on the line of the plants. April is the most suitable season for setting the hedge.

The plants should be shortened both top and bottom to about nine inches in length, leaving but one inch of the top; they should then be assorted, and those of uniform size and vigor set together; the largest should be set on the poorest ground. Stake off the ground and draw a line where the row is to be set. An iron pointed dibble is a good implement to open the holes with. This may be made an inch or more in diameter, and pointed; it should have a cross-piece for a handle at the top, and a projecting arm twelve inches from the bottom, to aid in inserting it with the foot.

It was formerly recommended to set the plants ten or twelve inches apart in the row, but from later experience six or eight inches is found wide enough. Some hedgers advise setting the plants as close as four or six inches. The stronger the land the nearer the plants should be set. Open the hole perpendicularly, and insert the plant half an inch deeper than it stood in the nursery, leaving half an inch of the top above the ground. Care should be taken to fill the hole, bringing the earth in close contact with the whole length of the root, from the bottom upwards; this is best done by entering the dibble the length of the plant a short distance from it, crowding the earth towards the root, and with the foot press the surface around the plant. The planting may also be done with the spade, making an opening for the roots and closing it in the same way as with the dibble.

The row should be kept clean of weeds and the ground well and thoroughly cultivated with the plow and cultivator, throughout the season; and before winter sets in it would be well to turn a shallow furrow from each side towards the plants to turn the water from the row.

If any of the plants make a strong, upright growth in advance of the others, they should be shortened during the summer with a corn knife or hemp-hook; this should also be done during the subsequent growth of the hedge, whenever these strong, upright shoots appear.

*Second Year.*—The following spring after the plants are set, the furrow should be leveled off and the plants cut down to within one inch of where

they were first cut. This is done with a strong scythe. If any of the plants have failed to grow, the vacancies should be carefully filled with strong plants from the nursery, held in reserve for the purpose. The row must again be well cultivated as in the preceding year. About the last of June the tops must again be cut off to within three inches of the last cutting.

*Third Year.*—Before the sap rises, the tops should again be cut to within three or four inches of the preceding cutting, and again repeated in June, leaving four or five inches of the last year's growth.—The cultivation should be continued through this season, which will be all that will be required; the lower branches having extended so as to keep down the weeds.

*Fourth Year.*—The first cutting for this year should be within six inches of the last, and the lower lateral branches should now be cut for the first time, to within 18 inches of the main stem, on each side, leaving the hedge three feet wide at the bottom, and tapering upwards, so that when finished it will present a handsome oval, roof-like form. After this the semi-annual trimmings must be continued, leaving but a short growth each time, so that the hedge shall not exceed, at the end of six or eight years, five feet wide at the ground, and not over five and a half feet high.

The natural tendency of the Osage Orange is to send up strong upright branches, which diverts the circulation and checks the growth of the lower branches. In order to prevent this and add strength, vigor and compactness to the base of the hedge, these upward branches must always be checked as soon as they appear, and there must be no omission or delay in the regular trimming. It is from this neglect that so many failures to make a hedge of this plant, have arisen. It must be a settled determination of every one who plants a hedge that the work shall be well and faithfully done, and that the necessary shortening in of the branches shall never be delayed beyond the proper period; or the attempt will prove a failure, and the labor and expense will be in vain.—*Colman's Rural World.*

*SAW DUST OR DRY EARTH.*—The *Country Gentleman* advises the use of saw dust, mixed with sulphuric acid, as a means for keeping stables sweet. We have our reasons for preferring dry earth—because, first, earth is a better deodorizer, a better absorbent, makes a better manure, and finally, is the *only* thing that ought to be used in a stable. It pays to use it in every way. Saw dust of itself is an acid substance, unfit to apply to land, until it has undergone decomposition. Dry earth on the contrary is just the substance to carry back to the soil, charged as it would be after use in the stables, with the ammonia which inheres to it. Let farmers, stable-keepers, everybody try it, and try it liberally. It will pay.

## GRASSES AND THEIR MANAGEMENT.

"Here I come, creeping, creeping every where;  
By the dusty roadside, on the sunny hill-side,  
Close by the noisy brook, in every shady nook,  
I come creeping, creeping every where."

MRS. SARAH ROBERTS.

The cultivation of different kinds of grasses, for agricultural purposes, is a consideration of eminent importance; and every farmer should make himself familiar with grasses, as it is quite as important to know how to grow a good crop of grass, as a crop of grain. And sometimes it requires the exercise of more science, skill, and judicious management to grow a remunerating crop of grass on some kinds of soil, than for a fair crop of grain.

The true or natural grasses are described by botanists as plants with long, simple, narrow leaves, in two alternate rows, each leaf having many fine veins or lines running parallel with a central prominent vein or mid-rib, and a long sheath divided at the base, which seems to clasp the stem, or through which the stem passes; the stem, with very few exceptions, being hollow and closed at the nodes or joints. This describes Indian corn, wheat, rye, oats, barley, millet, all of which belong to the grass family. The artificial grasses are cultivated and used like grasses, but do not belong to that family, among which are clover, lucerne, and sainfoin; these belong to the pulse family, and are designated as leguminous plants.

I have intimated that the grasses are patient under abuse, and get a great deal of it! No other crop will better reward good culture. Grass will do something where other crops will do nothing; and manure and good cultivation meets with as favorable returns when bestowed upon grass as upon other crops. Few crops will bear as high manuring as grass.

Farmers should acquire a knowledge of grasses, their individual peculiarities, adaptation to different soils, climates and circumstances, and their relative value for different kinds of farm stock. New kinds of grasses should be cultivated on a small scale, for the purpose of ascertaining their value for pasture or hay. The seed of all the kinds of grass, to which I have alluded, may be obtained in most of our cities at seed stores; and some persons often send hundreds of miles distant for new kinds of seed that may be procured in their own county.

In many old pastures in the New England States, in some of the dairy counties of New York, and some other States, there are several varieties of what farmers called natural grasses, that afford sweet and nutritious feed for neat cattle and sheep, yielding also the best qualities of milk and butter. These grasses form a rich turf covering the entire ground. Many farmers in our dairy regions, esteem these natu-

ral grasses very highly; and some contend that it is impracticable to obtain so good butter and cheese from grass growing on recently seeded ground, as from the oldest meadows and pastures. In some old meadows may be found sometimes, five or six different kinds of good grass. The favorite grasses used for re-seeding by most farmers, are timothy, orchard grass, Kentucky blue grass, the clovers and red-top.

In re-seeding, some attention will be needed to have a greater variety of grasses than is commonly employed for putting down pasture and meadow lands. It has been shown that in rich old natural pastures, from twelve to twenty distinct species are found in the sod; and that the number of plants to the square foot is greater when there are several kinds intermixed.—S. E. T., in *Working Farmer*.

## CARE OF LAWNS.

There is no season of the year when careful and persistent watchful attention and labor is more requisite to the perfection of a lawn than that of the early spring months. Nor is there any season during which the same amount of labor is better repaid by the future results. A severe rain, followed by a sharp frost, or a half dozen clear days, warm and bright, with cold, freezing nights, always results in throwing more or less of the turf and grass roots, which, if not at once and almost daily rolled and again pressed down, would by exposure at this time die out; besides, if the lawn be now left to take its own course without the use of the roller, there will ensue more or less of a rough, uneven surface, caused by some lines of soil being finer and heavier than others, and therefore settling more rapidly and firmly.

If by any previous neglect the lawn has already got upon its surface small pit holes or undulations, varying from four to six inches across and half thereof in depth, now is the time to go over it with a barrow of fine soil and fill them up, at the same time filling the soil with a heavy seeding of pure lawn grass seed; then finish by rolling again and again.

If the lawn has become impoverished, make a mixture of pulverized hen manure or guano, two parts, and two parts of fine, very fine, *bone meal*, *not bone dust*, one part of plaster, (gypsum,) together with two parts common salt, (seven parts in all,) and sow at the rate of eight bushels to the acre. Sow just before a rain, and as soon as the rain is over roll thoroughly, and then follow with two bushels of clean blue grass seed to the acre, and another and another, and yet another rolling. Before doing anything, however, rake the lawn thoroughly to clear it of chips, stones, etc.—*Cor. in Rural New Yorker*.



## MUSHROOM CULTURE.

Mushrooms are not cultivated to any considerable extent in this country. A few beds here and there, mainly among our vegetable gardeners, yield a scanty supply for a constantly increasing market.

The numerous inquiries for information, in regard to the culture of mushrooms, which have lately reached us, show that many of our people are desirous of trying to grow a sufficient quantity for home use, if no more. It is certainly a very simple matter to grow mushrooms; still it requires some little practice, and considerable care to produce the best results.

The first thing needed is a pit, cellar, or building, where the temperature of the bed will not be subjected to the changes of our variable climate. A common cellar or old outbuilding will do for the summer; and as it is at this season most persons will attempt mushroom culture, we will suppose some such place is selected.

Gather fresh horse-droppings from the stable, discarding the straw used for bedding. Place the manure directly under cover and fork it over occasionally, or every morning when a fresh lot is added, and to this add about one fourth the bulk of fresh loam from an old pasture. If manure enough can be procured at one time, then mix soil and all together and turn it over, and allow the mass to commence heating before removing to the beds. When the mass has become warmed through (two or three days will generally be sufficient), prepare the beds, four feet wide, and as long as desired. Make the beds six or eight inches deep by carefully spreading the compost evenly, and pressing it down firmly with the back of a spade. When the beds have been formed, moisten them, but not soak, with water, and then cover the whole surface with straw.

In a few days, the temperature of the beds will rapidly increase, often reaching 100°, then, again, receding to 80° or 90°. By plunging a thermometer in the bed, the exact temperature can be ascertained. When the bed has cooled to 85° or 90°, it is time to add the spawn, which can be obtained at any of our seed-stores. Break up the spawn into pieces of the size of a walnut, and with a dibble insert the pieces, placing them about two inches deep, and nine or ten inches apart each way. Cover again with straw, and allow the bed to remain a week or two, or until the spawn has spread through the bed; then take off the straw and cover the entire surface two inches deep with good, rich loam, smoothing it down with the spade. Cover again with straw, and wait for the appearance of the mushrooms. If the bed should get too dry, warm water must be added; but where the beds are inside of a close build-

ing, very little water will be required before the first picking.

Beds will usually produce continuously for two or three months after they once begin. Sometimes a new bed will not produce any mushrooms for a long time, and then start and be very productive. We mention this, as some persons get impatient and destroy a bed that would have yielded a fine crop if let alone for only a short time.—*Hearth and Home.*

## COOKING FOOD FOR STOCK.

The Massachusetts State Board of Agriculture discussed this subject at their meeting in December, 1867, as we find in the report of that body for 1867-8. The speakers were all men of high character, mature years, experienced in breeding, keeping and fattening cattle, most of them engaged in the dairy business—and there was but little difference of opinion as to the use and value of food cooked in some way. Professor Agassiz, the illustrious naturalist, shows in the following clear, plain, and unmistakable language, the reasons why food for domestic animals should be prepared, it being premised that the food we give our stock is not that which nature provides at first hands, but is dried and mechanically altered in many ways. Soaking or steaming restores hay to its wonted bulk and succulence; and as Professor Agassiz said of this mode of preparing food in general: "It must save the secretion of saliva to an enormous extent, and therefore relieve the animal from a physiological labor which is very manifest. I have no doubt that must be the chief source of relief to the cattle, because dry food must be softened in order to be digested; and it must be done by the secretions of the mouth—by the secretory surfaces of the alimentary canal—and, in fact, by all the secretory surface of the digestive apparatus. Now, where does that come from? From the blood; and if you supply the food so far softened that the animal is relieved from that physiological labor, you place your animal in a much better condition for its work. I have no doubt that there is the explanation of your results—that your steam performs a part of the operation which your animal has to do itself by its secretion."—*Exchange.*

HOW MUCH SALT IS ENOUGH.—In England it is ascertained by experience that sheep require half a pound a week, which is twenty-eight pounds, or half a custom house bushel per annum; cows require a bushel and a half per annum; young cattle, a bushel; draught horses and draught cattle, a bushel; colts and young cattle, from three pecks to a bushel each per annum. It is also customary to use, in curing a ton of hay, ten or fifteen pounds of salt. Whether it would be best to use a like amount in our hay mows and what is the best method of salting cattle, are I think practical subjects of inquiry.



## WHEAT AND ITS CULTURE.

BY GEORGE GEDDES, OF NEW YORK.

Wherever good wheat can be produced, the flour made from it will be the material most used for making bread. The more advanced in civilization any people may become, the more certain it is that they will use this material for bread; and thus it happens that countries whose soil and climate do not favor the production of wheat, if the inhabitants have sufficient wealth, will import largely their breadstuffs from more favored regions. There is no substitute for the wheaten loaf to him who has once become habituated to the enjoyment of it; and there is no grain, with the exception of rice, that is so extensively used as food for man. The almost universal demand for wheat flour, and the fact that but a small proportion of the earth is well adapted to its perfect production, renders it certain that choice wheat lands will continue in the future, as in the past, to be held as of great value. Communities that raise a surplus of wheat beyond their own wants, will generally be found to be every way prosperous, refined and cultivated, just about in the degree that this grain is made their leading staple. It would be difficult to assign too high a value to first rate wheat lands; and in a national point of view, it is likely that the possession of great districts of country that are well adapted to the production of wheat, will continue to produce a marked influence on the habits and prosperity of the people. Nations that eat bread made from wheat will reach and maintain the highest plane of civilization. Anything that leads to the more economical production, and to the extension of the profitable culture of wheat, aids not only in promoting individual and national wealth, but is a blessing to the great mass of men, and especially to the poor. We want cheap wheat that is produced at a profit. The object of what follows, is, if possible, to aid in bringing about this desirable end.

**Winter Wheat.**

The soils best adapted to the profitable cultivation of Winter wheat, have a large proportion of clay and lime in their composition, with sufficient sand to prevent the formation of hard masses or lumps during the process of cultivation in moist weather. Such a soil is usually called a "clayey loam," and the springs of water that flow from it will be so impregnated with lime as to render it too hard to use for washing purposes. The trees that are usually produced spontaneously by such lands will be mostly of the harder kinds of wood, the oak abounding. This description is not intended to be either scientific or minute; but to indicate the leading characteristics with sufficient accuracy to enable the mere traveler, as he passes along, to judge of the capacities of an unsettled country so far as the soil alone can indicate. In settled districts the practices of the farmers will be a certain test of the wheat-producing powers of the land; for it is certain that where Winter wheat may be said to be a natural crop, there it will be grown in preference to any other.

**Winter Wheat Requires a Well-Drained Soil.**

Some lands are perfectly drained by nature; other lands, though they may have every constituent that the agricultural chemist may desire, will not raise wheat without artificial draining at great cost. The

more clay abounds the more elaborate must be this artificial draining. Sandy loams, with open, porous sub-soils, generally require but little artificial draining, and this is strikingly true when the land is but just cleared of the forest. While the roots of the trees are decaying and making channels through the sub-soil, many farms are able to produce wheat to perfection, that refuse to do so after the land has been under cultivation many years, and these root-made channels have become obliterated. This I have seen over wide-spread areas. When the land was new it was dry enough; when plowed for many years it had become so heavy that in wet times it was nearly mortar, and in dry times, hard indurated, and filled with cracks. Thorough draining is then the only remedy, and if clay predominates, it is the certain remedy. Undrained clay lands are never worn out, for the owner that lacks the energy to free them from stagnant water never has force enough to exhaust their fertility by cropping. Manure on such land is nearly thrown away. Draining is the first thing to be done, next thorough cultivation, then manure. Whoever reverses this order throws away his money and his labor. There are some limited districts of country, where the soil has been formed from disintegrated shale, or soft rock, that was so constituted that it has given sufficient consistency to make good wheat land. The sub-soil, or rather the underlying rock, being full of cracks and seams, allows all surplus water to escape, thus perfectly draining every square foot. The owner of such land is fortunate, if the rock is only made of the right materials. There is but little of this peculiarly formed land. Most lands that are usually called "clayey loams," are due to an entirely different process of nature. The clay is deposited in water in thin layers, divided by lamina of sand. Water passes very slowly down through such soil, though it will drain horizontally very rapidly, finding its way along the thin layers of sand. In such a soil, tile draining is at once very effective.

There are clays in which the silicious matter is not in layers, but distributed through the whole mass of clay. These lands are very difficult to drain, and require drains to be very close together to make them suitable to raise wheat.

In the selection of farms, it is very common to prefer the sandy loams, because of their being more easy of cultivation, and more free from stagnant water, but if the object is to raise Winter wheat, it will be found in the end that the more clayey soils are the most valuable; from the fact that they are more enduring, and make better returns for the manure that is put on them.

Either extreme: too much sand, or too much clay, should be avoided in selecting a wheat farm. The experienced farmer will find no difficulty in knowing when he has found just the true mean; the unskilled may derive some benefit from the hints I have given.

While clayey loams are best adapted to the profitable production of Winter wheat, it is well to remark that there are other soils, such as gravels, sands and the like, on which crops of wheat are constantly grown. By using hardy varieties of wheat, I have raised fair crops on alluvium, once a perfect swamp, that had been deposited by the freshets of a brook, but the water of this brook has much lime in it, and the alluvium in some places approaches and is, in fact, an earthy marl. On all the inferior wheat lands, the crop is subject to dis-

ease, and to great injury from the depredations of insects, not having the power to outgrow and overcome these enemies. High manuring and perfect cultivation are absolutely necessary to secure average crops on these lands; and so forced must be the farming that even in new countries the owners of such lands very soon find that they can put them to more profitable uses. Spring wheat will be raised for a while, perhaps, but finally the whole country will be devoted to dairy or other purposes that compensate the cultivators of the lands much better than the returns from wheat. Thus the aggregate production of wheat is constantly falling off in all the older States. New lands are brought into cultivation as population extends West, and the first effort of their owners is to raise wheat; and they continue its production, in many cases, long after it has ceased to be a remunerating crop, for wheat raisers are reluctant to give up the contest.

The true wheat lands are such as will continue for ages to raise good crops, when properly cultivated and managed. The proportion that such land bears to the whole area of our country is much smaller than is generally supposed. The Hon. Theodore C. Peters, in his very able report, as one of the State Assessors of New York, published in the transactions of the New York State Agricultural Society for the year 1863, estimates the area of the wheat lands to be only 13 per cent. of the whole State; while he assigns to the dairy 35 per cent. Of this 13 per cent. of wheat land, he says that 41 acres in every 100 of improved land is devoted to pastures and meadows; and from his figures it appears, that of the 2,600,209 acres of improved land adapted to the raising of wheat, only 407,019 actually raised wheat in the year 1860. These figures of Mr. Peters show how limited is the area of the true wheat lands in the Empire State, and they should teach their owners something of their great value.

#### Cultivation of Land for Winter Wheat.

Imagining ourselves to be placed in a good climate, and on good wheat soil, that is free from all stagnant water, and free from all stumps, stones, or other obstructions to perfect cultivation; we inquire as to what is the first thing to be done to raise a good crop.

Of all the cereals, wheat demands that the soil should be pulverized in the most perfect manner, and if the soil is naturally stiff and hard, it must be broken to a considerable depth, that the roots may readily penetrate the sub-soil. This is the object and end aimed at in all the plowing and harrowing that goes before sowing the seed. The cheapest way of doing the work is the best, provided it is really done. When the country was new, and the land had been but little cultivated, this was a laborious process, and generally required several plowings and harrowings. Judicious treatment of clayey lands, while raising grass or grain crops in the rotation, will make the process of fitting it for laborious and expensive. It is usual to put Indian corn on a clover sod as the first crop in rotation, and some unwise farmers allow their cattle to run on the corn stubble in the fall, and poach up the clay while wet,—turning it into what the engineers call “puddle.” No practice deserves more censure than this. The next spring, when clayey land that has thus been mismanaged is plowed, it will turn up in hard lumps, that can only be broken up at a great cost—and, also, it will take much more power to draw the plow than it would if no cattle had been allowed

ed on the land the fall before. If the land abounds in sand all this is changed. Sandy land generally requires compression, and the feet of cattle and sheep are often judiciously employed for this purpose.

#### Clayey Lands must not be Plowed when too Wet.

I mean when there is stagnant water in it. All good soils are composed of minute particles that will hold a certain quantity of water, which is necessary to all crops. Excess of water is known as such as these particles can only hold by its being confined, and that would drain away if allowed to do so. Immediately after a heavy rain all soils are saturated with this redundant water, and at such times the wise farmer will neither cultivate his land, nor allow heavy animals to trample upon it. The more perfect the drainage of the land, the sooner this excess of water will pass away; and then comes the time when the skillful man will till his land. If clayey land is allowed to become too dry, it is not only hard to plow, but the work cannot be so well done as it can at the time that the land is just in the right condition as to moisture. Practical skill alone can decide as to the best time, all things considered, to cultivate so as to have labor expended in the most judicious manner.

Now, assuming that we have land that has been well managed, one flowing will completely pulverize it, if this flowing is done at the right time and in the most skillful manner. Narrow furrows made by plows just adapted in the shape of their mold boards to the land, are necessary. Complete disintegration of the particles is effected by just moving them on each other, and it is not necessary to lift the furrow slice high up, or move it far, to do this; the least breaking of the cohesion is sufficient. The harrow follows to level the surface, and more perfectly prepare the seed bed.

It may, and often will happen that by reason of wet weather or bad management there will, in clay soils, be some small lumps after the plowing and harrowing has been done. In such a case the roller or clod-crusher must be used to reduce these lumps to powder.

Next comes the drill to sow the seed in. A good drill following the roller not only sows the seed in the best manner, but it cultivates the land far better than any harrow. The drill spouts lift the surface soil and throw it into ridges, that by falling back cover the seed lightly at first, and still deeper as the weather acts upon them during the Fall, Winter, and following Spring, when alternate frosts and thaws are to be expected. The rougher the drill leaves the surface of the land the better; and there is no greater mistake than to roll clayey lands in the Fall, after the seed is sown.

In some open Winters the land will for many weeks be frozen hard and exposed to the winds, uncovered by snows. In such cases, gales will drive the dust made of the frozen earth, sometimes to great distances. If the young wheat plants, growing from the bottom of the trenches made by the drill spouts, have a ridge to the windward of them, they will be planted deeper by these gales; while if the ground were left level, the plants on ridges and the more exposed places would have all the earth blown away from them, and their roots exposed and killed by the unpropitious season. The drill is a most important farm implement to the raiser of Winter wheat, planting all the seed to a uniform depth, and



raising a barrier to protect feeble plants from Winter killing. But these barriers must be left until the trying period has passed in the Spring, then the roller should be used for the double purpose of leveling the ground, so that the reaper will move smoothly over it in time of harvest, and for the further object of breaking and crushing the surface soil after the rains and frosts of early Spring are passed. This rolling, if done at the right time, is of great value to the young wheat, and assists materially in covering the clover seed; but it must not be done until after the clover seed has been sown.

In sections of country that are subject to open Winters, it is advisable to run the drill at right angles to the direction of the prevailing winds. I have observed this in my own farming with advantage, and in cases where it was necessary to cross the line of the winds I have drilled the field diagonally.

#### Naked Summer-Fallowing.

When the country was new, the land abounding in the stumps of forest trees, and more or less loose stones, made the perfect plowing of land impossible. Summer fallows, as has been intimated, were necessary for the successful production of wheat.—Really, three plowings in those days did not cultivate the land, as perfectly as one does now that all these obstructions are away. To work among the stumps, we necessarily used plows that were short and sharp in the twist of the mold-board. Now our plows enter the ground at a more acute angle, run deep, and not only reverse every part of the furrowslice, but they crack and pulverize the whole mass. Not a balk is left by good plowman, and every part of the soil is worked in the most perfect manner. This being so, why waste the season in the useless labor of repeated plowings and harrowings? The only answer that can be made is, our fathers did so, and taught us to do so.

To state this a little more fully: Let us suppose that we have a clover field that we intend to sow with wheat. One way of doing the work will be to plow under the sod soon after corn-planting, say early in June, harrow the ground down level and smooth. There let it rest until after harvest, and then in August plow again and harrow as before. About the 1st day of September, plow the third time, harrow and sow the wheat. Thus we have the old fashioned naked fallow, and have not only done much hard work and lost all use of the land from the 1st of June; but we have exposed the soil by repeated working to the air and sun, and killed all the grass and most of the weeds that were in it. This killing of foul stuff is the gain we have made, and in cases where the land is very foul, this great labor may not only be justified, but may be well laid out, as the only means of getting rid of certain noxious weeds; but this is the only justification for a Summer fallow of this kind, where there are no obstructions in the way of thorough plowing. Let us compare this with another way of treating land.

Plow early in the Spring, if the land was not plowed the Fall before; sow barley or oats on it; harvest the crop; glean up with a steel-toothed rake—hung on wheels, drawn by a horse, and rode by the owner—all the straw, leaving as little of the barley or oats as possible on the land. Plow at once, if the land is foul, and harrow well; this will cause all the grain that shelled to grow, and also start the weeds. From the time the Spring crop of barley or oats is harvested to the time to sow wheat,

five or six weeks will elapse of the best weather of the whole season to exterminate foul stuff. If this time is well employed, and the season is dry and warm, much may be done by two plowings and as many harrowings, to make the land clean for the wheat.

Just the same work has been done, as in the case of the naked fallow, in the way of cultivation, and we have our crop of barley or oats that will not only pay for all the work, but will give a very liberal interest on the value of the land. Unless the land is quite foul with weeds, only one plowing is necessary after the Spring crop is taken off. A good clover sod turned under in the Spring will so decay that when it is turned up again, just before the wheat is to be sown, the ground will be covered with evenly distributed manure in its best condition, and at the best place to give life and vigor to the young plants.

I have tried, and seen tried, one, two, and three plowings, between the harvesting of the spring crop and the sowing of the wheat and am convinced that it is only in very rare cases that it is necessary to resort to the naked fallow; and in cases the work should begin the year before the wheat is to be sown, and the land be cultivated as often as the noxious weeds show themselves during all the season, up to wheat sowing. Where all this work is necessary, the farmer is engaged in killing weeds, rather than in raising wheat; and he will probably find that his crop of wheat barely pays for the labor.

This plan of raising wheat after a spring crop, has been extensively followed in this vicinity, and with entire success by our best farmers, and they very rarely resort to a naked fallow, though winter wheat is their leading crop, and their average is over 25 bushels to the acre, and their lands are growing cleaner year by year.

It is very common here to pasture a clover field up to the latter part of August, and then by one perfect plowing reverse the sod, and, perhaps, spread a light dressing of barn-yard manure that has been rotted on the furrows, then level down with a harrow and drill in the wheat. Sometimes the clover is made into hay, where the land is not required for pasture. By this treatment I have seen very large crops of wheat raised, and at less cost per bushel than by any other process. Lands that are heavy, that is, lands in which clay is in excess, it is advisable to plow earlier than the latter part of August, and by means of the harrow and steel-toothed cultivator keep down all the weeds, and keep mellow the surface of the soil. More time is thus given to draw and spread the barn-yard manure and to allow the sod to decay and benefit the young wheat.

#### Quantity of Seed Required for an Acre.

This depends somewhat on the variety, and the time and manner of sowing. The tendency among wheat raisers has of late years been to the use of less seed than formerly. This is perhaps in part due to the general use of the drill. Thirty years ago few farmers here sowed less than two bushels to the acre; but it was sown by hand broadcast, and then harrowed—some of the seed would get so deep that it did not come up—some lay on the surface, and was food for the birds. The introduction of the drill enables us to put all our seed at the desired depth, and thus secure the growth of every grain; and now few farmers here use more than a bushel and a half to the acre. Mr. John Johnston, who is



an acknowledged authority among us, told me last Summer that one bushel and a half of Deihl wheat was as much as should be sown on an acre. Too heavy seeding is not only a loss of the grain, but it causes the crop to fall, and thus lead to a more serious loss, and to extra expense in harvesting.—Wheat that has a large berry, will have less in number in a given quantity by measure, than the smaller varieties, and of course more by measure will be required. The general tendency, is, however, not only here but in England to lighter seeding; and many experiments made in both countries go to show that half a bushel or even less of seed would be sufficient to furnish all the plants necessary for an acre, could we rely on preserving every plant alive through the Winter and Spring. For Mediterranean wheat a bushel and a half is generally sown; for Tread-well and Weeks, being smaller in the berry, a little less is admissible, when sown early, and on ground in first-rate condition.

#### Time of Sowing.

Like many other matters in managing a farm, this is a point in regard to which no positive directions can be given; only general suggestions and advice are admissible.

The leading object is, to have the young wheat strong in the root, without too much top, before snow comes or the ground freezes up in the beginning of Winter. Most experienced wheat growers would probably say that they had lost more by sowing too early than by sowing too late. In this latitude (43°) my own opinion favors the ten days from the 15th to the 25th of September, in ordinary seasons. Wheat sown from the 1st to the 10th of September has generally grown too much top to Winter well with me—and the Hessian fly is very apt to make his lodgment in early-sown wheat. If the sowing is deferred, until the frosts may be expected to destroy the fly, before the plants are sufficiently grown, to take possession, and the land is in high condition, we usually avoid the fly and secure sufficient Fall growth by sowing about the 20th of September. The objection to large growth in the Fall is the liability of having the wheat smothered under deep snows, that sometimes remain on the ground for three months or more. Unless the ground is frozen hard before the snow falls, heavy drifts will Winter-kill wheat that has a large top.

#### Harvesting Wheat.

Much has been said in favor of cutting wheat early, while hardly out of the milk. This is bad advice for many reasons. The farmer gets less wheat than he does if he delays cutting until the berry is too hard to flatten under the pressure of the fingers. The time required to cure unripe wheat is so great, that there is great danger of rains wetting it more than once before it is ready to be put into the barn. Less labor will be required to harvest and secure a crop of wheat, by allowing it to stand as long as possible, without having the grain waste by shelling in the handling. Farmers that raise large crops will necessarily cut some of it as early as it will do, and then, perhaps, not be done with harvest before something will be lost by shelling.—That part of the crop that is just ripe enough to be drawn the same day it is cut, will go into the barn with the least cost.

It is curious to see farmers, living side by side, adopt entirely different practices as regards the con-

duct of a harvest. One will go on and cut his whole crop before he draws any to the barn, then draw it all in at one job if he can; his neighbor will secure his crop in the barn as fast as it is fit to be housed and will stop cutting, if necessary, to do this, preferring that his grain should be wet by showers while standing than in the bundle. Wheat in the sheaf, once fairly drenched with rain, requires three days of good weather to fit it for the barn.—The danger of wheat sprouting is always to be kept in mind; and though in very good weather a crop of wheat will be best harvested by cutting the whole crop, and then securing it, it is safer to adopt the plan of drawing as fast as ready. Our own unvarying rule is,—secure the crop at the earliest moment.

#### Improvement of Seed.

It is not necessary for me to dwell on the importance of raising no foul stuff with wheat. I am no believer in the turning of wheat into cheat or anything else; but I am a believer in clean land and entirely clean and sound seed, and thorough cultivation; and I believe that our wheat crops might be greatly improved in quality and increased in quantity by careful selection of seed. Let a farmer first determine the best variety for him to raise. At or before the time of thrashing, set some sheaves on a floor, heads upward, and then draw out the most perfect heads—those of the greatest length and the best filled—until he has enough to sow an acre. Put this selected seed on land in the best condition in every respect; weed the wheat the next Spring. This acre should give him 30 or more bushels of seed for the next year. Out of this grain draw the best heads, and sow an acre; and so go on for several years—the longer the better—and by-and-by he will have some seed wheat to sell that he may be willing to have bear his name, and he will be a public benefactor.

The PERILS from disease and insect, to which wheat is especially subject, will be discussed in another article.—*Deitz's Farm and Stock Journal.*

How to SECURE GOOD OATS FOR SEED.—A correspondent of the Country Gentleman says: "Place your oats in a heap on the middle of the thrashing floor, on the end that the wind blows to. Get you a milking stool and a small scoop—your wife's flour scoop will do—and throw the oats, with a light turn of the wrist, to the other end of the floor, against a gentle wind. A little practice will soon enable you to throw it in a half circle and at the same distance. Sweep off now and then, if you have much, the utmost circle for seed, the light oats or feed, and the weed seed to burn. You will now have seed oats worthy to sow, without buying at \$5 per bushel. I have seen oats grow in Sweden until I was forty years old, but I never saw a heavy crop where the seed was not selected as above."

The New England Farmer gives the following as a remedy for film on an animal's eye:—Pound and rub alum into a powder, making it as fine as flour. Fill a common goose quill partly full with it, and from that blow it into the eye. But if the eye is bruised by a blow, that is another matter, and the alum would probably do no good.

### The Tomato and its Culture.

This delicious, delicately acid, cooling, healthful, and now almost indispensable fruit, whose hygienic qualities have been tested by the human system (that most perfect of laboratories), is by careful culture, being brought to perfection; and instead of coarse, unsightly, spongy, seedy, ill-flavored tomatoes, the desirable qualities of earliness, productiveness, size, solidity, fewness of seeds, evenness of form, richness of flavor, and beauty of color may be secured.

*How to Start the Plants.*—For family use to get early fruit, sow seed from the earliest ripened fruit [in a little box containing three or four inches of rich soil] any time from the beginning of March till the opening of Spring, and for a late crop sow seed when the Spring opens, in the open ground; plants from the latter will fruit till frost comes, and longer if protected. Place the little box near a window where the sun can shine on it, in a warm room, of even temperature. Water (with tepid water) once a day. Let the plants have light and sunshine, and all the fresh air they can stand. Ill-grown plants, crowded to suffocation, such as are seen in most dealers' hot-beds, have little value.

*Transplanting.*—When the rough leaves come, transplant into pots, or a box, and do so three or four times, till open ground culture. Water freely each time before transplanting, so that a ball of earth may be removed with each plant.

*Open ground culture.*—Do not plant in the open ground, unless the plants are protected, till all danger of frost is over. They will flourish in a rather light than heavy, and rich, but not over-rich soil. Hoe early and often. Let no weeds grow. Keep the soil friable.

*Pruning.*—The advantages of pruning have been questioned, but my tomatoes grow best when well pruned. Cut out all suckers, and non-bearing branches. Let in light, air, and sunshine. Most of the fruit grows on the lower part of the vines, and there will be no loss by shortening them; for nutrition will then flow to fruit instead of making fibre.

*Supporting the Vines.—Keeping the Fruit Clean.—Training.*—It is sometimes thought well, in garden culture, to support the vines by brush or other refuse material, or by training, which may be done by setting poles 12 feet apart, the tops five feet out of the ground. Attach wires to them horizontally. Thus the fruit may be exposed to the free action of sun and air.—P. J. L., *Little Falls, N. J.*

*ADVERTISING.*—That was a profound philosopher who compared advertising to a growing crop. He said: "The farmer plants his seed, and while he is sleeping the corn is growing. So with advertising. While you are sleeping or eating, your advertisement is being read by thousands of persons who never saw you or heard of your business, nor never would, had it not been for advertising."

### THIN SEEDING.

Much has been written upon the above subject, and I am glad to see that it is beginning to have its effect among our practical men. Its constant repetition in the columns of agricultural papers has led me to apply to it a little arithmetic. Of course arithmetic is not agriculture; and whatever the farmer may declare, the practice of the latter must depend on the teachings of experience in the field; but arithmetic will very well answer the purpose which I have in view, viz., to show that we use much more seed than is really needful, if we would only strictly obey the laws which govern its germination.

Let us take as samples wheat, oats, turnip, and red clover seed: An average bushel of wheat contains 600,000 seeds; oats 540,000; one pound of turnip seed 180,000, and one quart of clover seed 500,000. We usually sow one and a half bushels of wheat per acre; this, if evenly distributed, will give 186 grains per square yard. In sowing two and one-half bushels of oats per acre, we have 223 grains per square yard. When we use three pounds of turnip seed per acre in drills two feet apart, we have 100 seeds in every yard of the rows. In sowing six quarts of clover seed evenly over an acre, we deposit 580 seeds per square yard of surface.

Many of us sow six quarts of timothy and six of clover per acre,—and it is a consolation to us to know that in so doing we give each square yard a chance to start with 1200 seeds; so that, if two seeds in ten grow, we will still have enough for a large crop of hay.

There are several reasons why we have found from experience, that we need to sow these amounts. I say *need*—for under our present modes of cultivation and sowing, such amounts are needful, though HALLET of Brighton, England, has demonstrated again and again that under a different mode of culture and planting, with improved seeds, the amount which we use per acre of wheat is enough for ten acres, producing a larger yield per acre.

There are several causes why so much seed must be used; first a certain percentage fails to grow, from defect or want of vitality in the seed, especially in our small light grass seeds; a certain percentage is not covered at all, and a larger amount covered too deep, leave no more of the original amount to come to perfection than is absolutely needful.

As we improve our cultivation and seed, we will need to grow less per acre.—*Cor. Practical Farmer.*

"My dear," said a rural wife to her husband, on his return from town, "what was the sweetest thing you saw in bonnets in Baltimore?" "The ladies' faces, my love."



## Horticultural.

### SEARCH FOR OURSELVES.

It is very strange in these days to find persons when they argue on any new idea, bringing up the "experiments of Sir T. A. Knight," Loudon, or others who lived a hundred years ago, when often a few moment's experiments would furnish facts of their own. In our own experience, we have looked on no man's observations as sacred as our own; and whenever we have heard or read of any one's experiments, have endeavored, whenever practicable, to repeat them over again. It has often resulted that we have found former observers wrong, and as the beautiful theories are founded on these wrong facts, it has made it necessary for all of us to "learn the hard lesson over again."

We often think it strange that people are too lazy to hunt up facts for themselves in cases where personal observation would be priceless to them.

We have been present this season at various meetings of horticulturists, and have heard discussions by the hour on questions which a few minutes of personal observation would at once settle; and we have thought that we could do no greater service to our readers than continually to urge them to "see for themselves."

Some years ago we all believed that a very finely pulverized and clean surface soil, kept the substratum cooler and moister than a closely shaven grass surface. When the writer put his hand on a lawn and found how cool it was, and how hot it was on a cleanly weeded surface, and knowing that evaporation was always in proportion to the heat of the surface, we felt that such a warm surface *must of necessity* be hotter and drier than that under the grass. But it was easy to try it with the thermometer, and sure enough the glass told the tale by many degrees of more heat under the clean surface.

Thousands of persons must have read our statement of this fact,—yet on a recent occasion, our repetition of it at a meeting, called forth a volume of disbelief from eminent men present; *but not one had ever tried it.* Of the thousands we have referred to, we doubt whether *one* has ever repeated it,—and yet the whole body of fruit growers base their practice on a theory, which has no foundation in fact. Any one with a thermometer may satisfy himself any summer's day, that a finely pulverized surface *is not as cool* as one protected from the sun's direct rays, and the fact should be of immense value to fruit growers.—*Gardener's Monthly.*

Why are wheat and potatoes like idols of old? Because the former have ears and hear not, and the latter eyes and see not.

## THE ORCHARD.

I read an admirable article in a number of THE HORTICULTURIST, for 1869, on the "*Orchard*," much of which I heartily endorse; but there was one practice recommended that I must here assail, with all due deference to the opinions of the author of that article. I refer to the question of cultivating (plowing) the orchard. Until the trees are ten years old this is the proper treatment, but after that age I would *never* suffer the ground to be molested with plow, hoe or spade; but would treat it very much as recommended in the article—save only the stirring of the soil—that is, I would at the tenth year sow it to red clover, and never cut it off, but let it die down and *rot*, or I would turn in hogs or sheep to eat off the first crop, allowing the second blooming the same season to grow up to seed and fall down for the next year's crop of seed. In this way the ground would be mulched summer and winter. I would keep it in clover as long as it would grow well, and after that sow any other grass seed that would not make too tall a growth, and alternate with clover every few years. The plan of stirring the soil injures the roots, and of course injures the trees, and the result is that the fruit either falls prematurely, or specks and rots. During the first decade after planting I would never stir the soil *under the branches*, except an inch or two deep, and under the branches I would cut and scatter some clover three or four inches deep in June, and in December would place straw of some kind the same depth, but not within two feet of the trunk, as that would harbor field mice, to the injury of the bark. Such has been my practice and observation with uniform success, while, on the plan of stirring the soil, great and irreparable injury has followed. How far this plan of mine would be successful and best in other soils and climate differing from Kentucky, I am not advised, either by observation or information, except that contained in the excellent article referred to; but I am inclined to the opinion that the same general rules and natural laws would apply, and I should behoove to adopt any other practice anywhere than the one briefly set forth herein.—HENRY T. HARRIS, in *Horticulturist*.

PROTECTING THE TRUNK OF TREES AGAINST THE SUN.—The training of the branches of trees low, in a pyramidal form, is one of the most effectual plans of shielding the trunk against the ill effects of the sun. Where trees already have high branches, a board adjusted to shield the bark from the midday sun will be found useful. A western cultivator, trying this once, states "that since he tried it he has lost no more trees, and the bark on that side remains as smooth and as soft as on any other part of the tree."



*From the New York Evening Mail.*

## THE VINE IN EUROPE.

Recent Observations by an American  
Vine-Grower.

Practical Details for Practical Men.

BY CLARK BELL.—CONCLUDED.

### FOREIGN IDEAS OF VINE CULTURE AND WINE MAKING.

I have thought it might be interesting to practical grape growers to furnish some of the ideas which are entertained in different countries on various questions connected with the vine and its fruit, and the management and treatment of wines, which have not been alluded to, except, perhaps, incidentally, in the foregoing chapters, and I furnish them without order or classification, and as I have jotted them down in my note-book.

1. In setting a new vineyard on terraces on hill-sides, while it is well to set them at regular intervals in the rows, they should not be planted so as to face each other, *i. e.*, one plant on one terrace should not be in line with the corresponding plant on the next terrace, above or below, for sake of light or air and circulation, and I think this is so reasonable as to commend itself to the consideration of American growers.

2. It is believed in France that a crop of any kind grown in a vineyard, between the rows of the vine, imparts a disagreeable taste to the wine, and that sometimes this taste will slightly resemble the particular vegetable or cereal thus grown.

While this idea obtains in France it is scouted in Italy, where crops are always grown between the rows of the vines, but the Frenchman would probably prove his case by the Italian wines, as they are so uniformly poor, when by every reason they should be good.

3. It is almost universal to mingle the red and white fruit, either in the wine press or in the wine, in various proportions, more generally of about three of red to one of white.

The idea seems to be that the red is more valuable for coloring qualities, while the white lends the delicacy of taste and the bouquet.

4. Most growers prefer to start a new vineyard in the Autumn rather than in the Spring. They claim that they gain a whole year by it, while they are saved from the loss that always occurs from plants not living that are planted in the Spring.

In the one case a new plant can be reset in the early Spring in the place of the missing vine, while in the other you must wait till another season and have a whole year's difference in the age of your plants, which is not at all desirable.

My own experience has been at home against this theory. I have always had the best success in planting a new vineyard in the Spring. It should be done very early, so as to have the benefit of all the Spring rains; and, if the ground is properly prepared and care is taken in the selection of good and strong plants, there is very little danger of any of the vines missing. I have set frequently an acre of vines with but the loss of three or four plants. A slightly stronger plant can be set in the fall in the

vacant places and it nearly catches up the next season.

The objection in our climate to Fall setting is the Winter, which not unfrequently kills the young plants. Our winters must be more severe than those of Europe in the vine districts.

5. It is considered that vines produced from cuttings live longest, and produce the most fruit, and that those produced from layers start soonest and come quickest in full bearing.

Preference is given to cuttings over layers in nearly all countries.

This is not universal, as many vineyards are propagated by layers, but the temptation to quick returns, no doubt, has overcome in some localities rather than their merit. It is sometimes six or seven years before a cutting can be in full bearing.

Three or four years are enough for layers.

6. It is rare to see any considerable proprietor relying on one or even two varieties of the grape. Each variety has its peculiarities, and is affected by climatic influences in ways peculiar to itself.

The more prudent use from four to six varieties, with the idea that they thus run less risk from the accidents peculiar and necessarily incident to vineyards.

If all one kind is lost, or even two kinds, they have the others to fall back upon. This is no doubt wise for us. Our Delawares and Concordes are picked before our Isabellas, and the latter may be in the wine-house when an October frost has touched our Catawbas.

7. It is rare to make wine abroad from one variety of grape. Though most growers have their favorites, many kinds are almost always mingled in the wine. Three and four varieties thus mixed are common, but sometimes even ten and twelve kinds are mingled to produce one brand. So far as I have experience or knowledge, little of this is done in our country in the wine press.

Isabellas and Catawbas mixed unquestionably make better sparkling wine than the latter alone, but this is usually done by mixing the wines after fermentation. Would it not be worth our while to mix, for an experiment, the various kinds of our standard fruit, in the vintage, and make a Champagne from Isabellas, Catawbas, Delawares, Concordes, Ionas and Dianas that have all fermented together? I should like to taste a still wine the fruit of such a union. Most of the foreign wines are produced in this manner.

8. The French, who doubtless understand the culture of the vine better than any other people, say that the art of adapting each particular species of vine to that soil which is most congenial for its culture is still in its infancy.

Every aid which enlightened science can bring to throw light on this subject is closely studied and observed in France.

This involves also all the studies and speculations of the difference noticed in the same vineyard and of same varieties, most extraordinary in character, and which is seen, perhaps, to best effect in the wine.

The prevailing idea is that these differences are, in the main, ascribable to differences of soils, about which a world of study and investigation is and has been for years going on.

9. Preference is always given to the hills for a vineyard over a plain.

A warm hill-side, with wooded summit and southern exposure, is considered the most favorable site

for a vineyard. Still there are wonderful exceptions to this.

The splendid wines of the Gironde, near Bordeaux grow on the plain.

Both sides of the Rhine and Moselle seem equally well adapted to the vine.

Some of the best wine of Rheims is grown on vineyards looking northward and away up to the extreme northern line of grape-producing Europe.

There are some parts of France where a western exposure is found by experience to answer best.

As a general rule, in northern latitudes a southern aspect is preferred. In the South an eastern exposure.

#### Soils.

10. Any soil not retaining stagnant water will grow the vine, but those that are light and dry, and stony or sandy are considered the best.

The lighter and drier the soil, the smaller the plant, sweeter the fruit, and the better the wine. Porous soils, calcareous and more especially chalky soils, produce splendid light wines.

That soil which is so very light and dry that it is literally fit for nothing else, is abroad often considered as especially adapted to the grape.

A soil should be so light and porous that it will not retain water, to be best fitted for the grape, and no matter how poor or thin it may be, if on a hill side, with a favorable exposure, and a warm sun, it is certain to yield a fair wine.

Abroad the quality of the soil is universally considered, in every case, to determine the nature, quality, and character of the wine.

#### Manures.

11. Every country has its various ideas of manures.

Ashes are considered good everywhere, and are often used.

The scouring of ditches and roads are considered excellent.

Composts are very often made, but the kind, of course, always should depend upon the character of the soil of the particular vineyard where it is to be used.

In some portions of France, Lupines are sown among the vines, and where they have come into flower, buried around the roots of the vines, and these are claimed to be very good indeed.

Top dressing from the old earths, found in old meadows, or in forests, are occasionally used.

Concentrated manures, bone dust, guano, etc., are also used in France. The dung of pigeons is considered one of the very best of manures.

In Italy and Germany coarse and strong animal manures are used.

The better idea abroad is, that for wine, manure must be used with great care and discrimination, as it is very apt to injure the fruit and to render the wine ill-flavored and greasy.

The prunings and litter of the vine are the natural manure of the vineyard and should never be removed from it. If too large it should be cut fine and mingled with the soil. Leaves of most kinds of vegetables and grasses are regarded as beneficial.

In most countries besides Germany and Italy animal manures are only used with the greatest care and sparingly.

The muck from the wine press makes a most excellent manure, and it is almost universally used.

#### Age of Wines.

12. It has become almost universally considered and believed that great age improves wine, and that the "older the better" is a true adage.

This is not at all true. It is a gross error to suppose that wine which will keep should only be drank when it will keep no longer.

Wines differ very much in their character as respects endurance, and in the length of time necessary to bring them to the highest excellence.

Mere age is no criterion. For example, the highest grades of Burgundy will not keep more than twenty years, while it will not improve after ten or twelve years. And it is doubtful if it is ever so good as when it is six years old from the vintage.

Champagne may support itself twenty or thirty years in the bottle, and will perhaps improve for eight or ten years, certainly not after that, and the true *bon vivant* would not ask for it more than ten years old, and many would prefer it much younger.

On the other hand the German hocks mature late. They improve every year, if well kept, till they are forty, and will keep splendidly for a century.

Some of the finer red wines of France are kept in wood for fifteen years before they are bottled, and then they will deposit in bottle every year, although they will keep one hundred and fifty years.

Most wines which will keep to old age lose some of their qualities as they grow old.

Age softens the French wines in their spirituous aroma, but often is fatal to their bouquet.

SOAP MAKING.—Mrs. L. C. Merriman, Lewis Co., N. Y., sends to the *Rural American* the following, which she assures us makes most excellent soap: "For one barrel of soap, pour into a strong barrel four pailsful of lye that will bear up an egg; add thirty pounds melted grease (previously tried and strained), and mix them well together. Let stand a few hours and then stir thoroughly. As soon as the soap begins to thicken, add weak lye, one or two pailsful at a time, until the barrel is full. Be sure to stir the soap thoroughly each time the lye is added, and afterward stir it once or twice daily for three days. For those who live in cities, the following recipe for potash soap is invaluable. Put in a strong barrel twenty-five pounds of potash, broken into small pieces. Pour over it four and a half pailsful of boiling water. Stir well, let it stand twelve hours or more, and then dip off carefully three and one-half pails of clear lye into another barrel. Next heat thirty pounds of strained grease, boiling hot, and pour into the lye. Stir well, and let it stand until it begins to thicken, which may be three or four days; and then add two pailsful of weak lye daily until the barrel is full, stirring well each time. The weak lye is made by adding more water to the potash which remained in the barrel."

A correspondent of the *Rural New Yorker* recommends adding one pint of salt to every pailsful of whitewash. He says this makes a covering "as hard as enamel and almost equal to paint."



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AT \$1.50 PER ANNUM,

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## Maryland State Agricultural Fair—Change of Time of Holding.

The special committee of five appointed by the Executive Committee of this Association in March last, for the purpose of arranging the list of premiums, &c., for the coming exhibition, and fixing the time for holding the same, have decided, in consideration of the inclemency of the weather during the last holding, to make it a month earlier, and have fixed upon Tuesday, Wednesday, Thursday and Friday, 27th, 28th, 29th and 30th of September next. The Executive Committee are already taking active steps to make the approaching fair a great success.

**MOBILE WEEKLY REGISTER.**—We call attention to the advertisement of the *Mobile Weekly Register*, the best paper published South or the country. It is democratic, conducted with great ability in every department—commercial, agricultural, financial and literary—has a large circulation, and rapidly increasing. We advise all who want a first-class Southern newspaper to take it. As a medium for advertising it is unequalled in the South. Col. John Forsyth is editor-in-chief. Hon. C. C. Langdon is the agricultural and horticultural editor.—Subscription \$3 per annum.

## Annual of Hudson & Menet for 1870.

We have received two copies of this elegant Annual from Hudson & Menet, General Newspaper Advertising Agents, containing a full list of all newspapers and periodicals published in the United States and Canada, with statistical information for the use of advertisers. Also a list of the leading papers throughout the world.

The Annual gives the name of the paper, with the population of the city or town, county, number of issue, and character. It also gives a brief history of each State and Territory.

The Messrs. Hudson & Menet are well endorsed by a number of the leading men of New York and other sections of the country for their promptness and reliability. Their address is No. 41 Park Row, New York.

## BROOM CORN.

A subscriber at Bowensville, Fauquier Co., Va., asks for the following information on the subject of the culture of Broom Corn. We would refer him to the January number of the *Maryland Farmer*, page 19, for an article on that subject, which we think meets his enquiries:

"Will you or some of your numerous correspondents give me, through the *Farmer*, all information necessary for cultivating and managing a crop of Broom Corn, and the probable difference between the profits of that crop and that of Indian corn."

**DISEASE AMONG DUCKS.**—A correspondent at Frederick, Maryland, seeks a remedy for a disease that is fatal among his ducks. Who can give him the information? He says:

"I have in the last three months lost a great many ducks with a disease that I have never seen before. It is a swelling of the craw, and it ends fatally in about three or four days. If you know the disease and the remedy, you will oblige me by letting me know in your next number."

**RECEIVED.**—We acknowledge the receipt of a lot of Vegetable and Flower Seeds from the Hon. Horace Capron, Commissioner Department of Agriculture, which we will test the present season. He will accept our thanks for the same.

**THANKS.**—Our thanks are due Luther Homes, Esq., Secretary, for an invitation to attend the Fourth Grand State Fair of the Mechanics' and Agricultural Fair Association of Louisiana, to be held at New Orleans, commencing Saturday, April 3d, to continue nine days.

A wag says that "Uncle Tom's Cabin" was not written by hand, but by Harriet Beecher's toe.



## IMPROVEMENTS IN TENNESSEE.

HENDERSONVILLE, SUMNER CO., TENN., }  
 April 16th, 1870. }

To the Editors of the *Maryland Farmer* :

Many "old-fogy" farmers laugh at "we young ones," thinking it a *good joke* to call us "book farmers." They know *all*—no book can give them any idea—their "grand fathers did not do so." Nothing in theory can be added to their *experience and practice*, they are merely land butchers, endeavoring to enrich themselves, ("*over the left*,") and leave as an heritage worn-out lands to—in many cases—an enterprising offspring, who will try and catch an idea, especially when founded on good reason, and actual experiment; but such old fogies are getting beautifully less; many seem to see into what current they are drifting—sometimes condescend to read an article dictated by experience, and try it *only* for "*experiment*," then claiming it as their system *for years*. We too, would laugh at a book farmer in their acceptance of the term—for a man to attempt to cultivate his farm by theory, without any experimental knowledge or observation—but on the other hand we can laugh at them. The reading man avails himself of the system of agriculture and experiments actually made and faithfully recorded of other men and other countries, as well as glean from Chemistry, Botany, Natural History and mechanics, those grand theories and principles to which all farming operations are subservient, and which these "know alls," if imparted to them, might be greatly benefited by adopting and laying aside the "great-grand-father" system which has long since been buried by science. Large farms are being abolished, at least such farms as every part of it cannot be made productive and remunerative to its owner, and its perfect and exact superintendence made practicable.

Many parts of large farms are left uncultivated, which eventually causes waste by washing and long exposure to sun, while if the whole had been under proper control and management would not only be increasing in productiveness, but very largely in valuation. A different system of agriculture is being and will be more pursued on account of labor, which is gradually leaving us. Negroes emigrating to the more Southern States for the cultivation of cotton, our attention is being more fully directed to Stock raising and grass. Living in a climate, the finest in the world, a happy medium that is peculiarly adapted to both, we will soon be prosperous and independent, as ravages of war are no longer sweeping our beautiful State, to which kind providence has truly been gracious. Our pastures which are nearly perpetual, consist of blue grass, a spontaneous growth; our wide fields are beginning to be well sodded as meadows watered by beneficent streams. Our farming population, when this is ac-

complished, will furnish so many examples of true nobility of character that ours may truly be looked upon as a most enviable position. Every day will be increasing the value of our lands, and every one trying to surpass his neighbor in improvement of stock and lands. Within a circle of twenty-five miles diameter, in the thoroughbred line, we have such distinguished horses as Vandal, Jack Malone, Muggins, Hiawatha and Gabriel, with the blood of such noted turf kings as Glencoe, Lexington and Wagner coursing through their veins, also the distinguished trotting Stallion Idol, from the Mambrino family, and a two year old, own brother to Dexter; our saddle stock as fine as any in the world; Jacks so numerous and so fine that our country will soon be full of the finest work stock of the "*long ear breed*." A wonderful improvement in the stock of cattle, sheep and hogs, is going on and daily becoming more fashionable. I think with this system of farming, and the advantages we possess, climate, land, stock, thrifty farmers, and intelligent and refined society, we will soon be a most happy and prosperous people, but ever ready to extend the hand of fellowship to the Old Foggy Farmer, acknowledging him as a brother, although an erring one. I can recommend the *Maryland Farmer* to every farmer, as I have always profited by its monthly visits, which are anxiously awaited. Ever yours,

SMADA.

## TWIN COLTS.

WOODSTOCK, SHENANDOAH, Co., Va., }  
 April 12th, 1870. }

To the Editors of the *Maryland Farmer* :

In reading the *Maryland Farmer* for July 1869, I find questions and answers about Twin Colts, none of your correspondence have known of any twin colts to live to good age. I have twin colts, both horse colts, foaled in May, 1869, they are both healthy, well formed and as forward as any yearlings that I have ever raised. Their dam was a thorough-bred Telegraph mare, and their sire a thorough-bred Industry horse. My colts are as likely to live, as far as appearance goes, as any other colts I ever saw. My neighbor has twin calves, both heifers, and two years old in June 1870, as promising heifers as any of the average cattle of that age. Thinking this may interest some of your inquiring readers, I have at this late date, noticed the inquiries, and give you my experience.

A. A. RIDDELL.

ALSIKE CLOVER, says Geo. A. Deitz, will not salivate horses as common red clover, and alsike sown with orchard, red top, or timothy, will make hay of first quality; it will not die and get black like red clover when the grass is left to get over-ripe. Two pounds of alsike and two pounds of orchard, or timothy seed, will sow an acre; three pounds of alsike clover seed alone is plenty to sow an acre.

**FERTILIZERS.**

The following standard fertilizers are offered by the manufacturers of Baltimore to the farmer and planter through our columns:

J. J. Turner & Co. offer the "Excelsior," which has been in the market for twelve years. Also, Dissolved Bones and Ammoniated Bone Super-Phosphate.

Walton, Whann & Co. offer Whann's Raw Bone Super-Phosphate. E. G. Edwards, Agent, 57 South Calvert st., Baltimore, Md.

Dugdale & Girvin offer Baugh's Raw Bone Phosphate.—Has been used fifteen years.

Moro Phillips offers his Super-Phosphate of Lime. Standard guaranteed. Also, Pure Phosphate.

Wm. Crichton & Son offer their Ammoniated Soluble Super-Phosphate of Lime for Wheat, Cotton, Tobacco, Corn, &c.

The Maryland Fertilizing and Manufacturing Company, Lawrence Sangston, President, offer Super-Phosphates, derived entirely from the Fossil Bone Phosphates of South Carolina. Also, Fine Ground Bone Phosphates, Ammoniated Super-Phosphate, and Cotton and Tobacco Food.—Office 58 Exchange Place, Baltimore, Md.

John S. Reese & Co., Agents, offer Soluble Pacific Guano, which has been largely used in the Middle and Southern States. Office 10 South Street, Baltimore, Md.

R. W. L. Rasin, General Agent, offers the Navassa Guano, to which he calls the attention of manufacturers of artificial manures and agriculturists generally. Office 32 South Street, Baltimore, Md.

E. Whitman & Sons, offer The Andrew Coe Super-Phosphate of Lime—a manure for field and garden crops. Also, Ground Bone, Bone Meal, Bone Flour and Prepared Land Plaster.

Baltimore City Fertilizing Manufacturing Company offer Flour of Bone, Ground Bone, Fish Guano, Ammoniated Phosphate, Refined Poudrette and Compost. John A. Thompson, Agent, 4 Wood Street, Baltimore, Md.

R. J. Ruth & Co. offer Ruth's "Challenge" Soluble Phosphate. Office 79 South Street, Baltimore, Md.

Joshua Horner offers his Bone Dust, for which he has great facilities for manufacturing. Office 63 South Gay Street, Baltimore, Md.

W. H. Oler offers Shell Lime for building and agricultural purposes. Can furnish it in any quantity. Office 176 West Falls Avenue.

James Webb offers 5,000 to 10,000 bushels of Leached Ashes. Office Corner of Chew and Ensor Streets, Baltimore, Md.

**SEWING MACHINES.**

We call the attention of our lady readers to the advertisements of several Sewing Machines to be found in our columns, all of which have met with great favor, as follows:

*Grover & Baker Sewing Machine*.—Office and salerooms 181 Baltimore Street. It is well endorsed.

*The Weed Sewing Machine*.—Salerooms Masonic Temple, No. 53 N. Charles Street. A simple and durable machine. Agents wanted throughout the country.

*Wheeler & Wilson's Family Sewing Machine*.—Salerooms 214 W. Baltimore Street. Peterson & Carpenter, General Agents.

**REAPERS AND MOWERS.**

The season is rapidly approaching when the farmer will be looking around to select a good Reaper or Mower. To assist them, we call attention to the following machines offered in our advertising columns:

Woods' Self-Rake Reaping and Mowing Machines. For sale by Thomas Norris & Son, 141 West Pratt Street, Baltimore, Md.

The "Advance Mower," the "New Yorker" Self-Rake Reaper and Mower, the "Champion" Reaper and Mower with Dropper and Self-Rake Attachments. For sale by R. Sinclair & Co., 62 Light Street, Baltimore, Md.

The Excelsior Reaper and Mower, with Dropper, Kirby Reaper and Mower, and other machines. For sale by E. Whitman & Sons, 145 W. Pratt Street, Baltimore, Md.

The Palmer Emery Grinder, for grinding Reaper Knives. Agents wanted. Address S. W. and J. F. Palmer, Auburn, New York.

The Clipper Mower.—For sale by E. G. Edwards, 57 S. Calvert Street, Baltimore, Md., who is also agent for Whann's Raw Bone Super-Phosphate.

**THE HAND BOOK OF HUSBANDRY.**—A guide for farmers, young and old, containing practical information in regard to buying or leasing a farm—when and where to buy—commencing operations—key-note of practical farming—fences and farm buildings—farming implements—drainage and tile making—plowing, subsoiling, trenching and pulverizing surface soil—manures—rotation of crops—root crops—forage crops—live stock, including cattle, horses, sheep, swine, poultry, etc., with winter management, feeding, pasturing, soiling, etc., with directions for medical and surgical treatment of the same—the dairy in all its departments—useful tables for farmers, gardeners, etc., illustrated. By George E. Waring, Jr., of Ogden Farm.

The advance sheets of this work have been received from the publishers, and from a cursory glance at it, consider it just such a book as the farmer and gardener need, as is indicated by the subjects treated of, and the manner in which they are discussed. The work will contain over 600 pages, with 116 practical illustrations and maps, and furnished to subscribers at \$3.50, \$4 and \$5.50, according to binding. Published by E. B. Treat & Co., 654 Broadway, N. Y. We commend it as a perfect hand book of husbandry, which should be in the library of every farmer.

**CABBAGES—How to Grow Them**.—A Practical Treatise on Cabbage, giving full details on every point, including keeping and marketing the crop. By James J. H. Gregory, Marblehead, Mass.

A copy of this pamphlet has been received from the editor, and we cheerfully recommend it to all interested in the culture of Cabbage. It describes every variety of the Cabbage, gives full instruction for the culture, marketing, &c., &c., with numerous illustrations.

**THE OHIO CONVENTION REPORT.**—It contains the proceedings of the Southern Ohio District Agricultural Convention, which embraces address of John H. Kilpatrick, Esq.; Discussion on Corn and its Culture; on Horticulture Speech of W. B. McClung; Discussion on Potatoes; Editorial Miscellany, &c. Published by J. G. Adel & Co., Columbus, Ohio.

**THE FARMER'S DOLLAR MAGAZINE**.—Is a new monthly published by Thos. M. Hughes, Esq., Ridgeway, N. C., at \$1 per annum.

In playing cards, a good deal depends upon a good deal, and one that "nigs" is a nigger.



BALTIMORE AND WASHINGTON HOMESTEADS,  
TRUCK FARMS, Etc.

To the Editors of the Maryland Farmer :

It is a singular fact that improvements of large cities and immigration generally tend towards the West, and strange to say our Baltimoreans, who luxuriate on shad, (said to be the greatest nourishers of the brain,) should have overlooked those lands and localities laying northeast of the city. — Without farther prelude, I take the liberty of describing the various positions most desirable for homesteads and truck farms; and to be brief, we will sight, if you please, the locality I am disposed to call Sunny Ridge; it forms a curved line, and about four miles from the city, and the same length from the Harford to the Philadelphia Road. The largest portion of the Ridge fronts the south, the remainder west, beautifully diversified by hill and dale, springs of water (cold as ice) gushing up, innumerable. The Ridge has a gradual ascent from the bed of the unpretending falls, called Herring Run, of about three hundred feet to the apex. Why it is called Herring Run, I cannot imagine—there are no herrings in its upper waters, nor other fish, except a few trout and gudgeons. No doubt herrings and other fish migrated to those waters previous to the ruinous practice of constructing mill-dams without leaving a passage for the fish to ascend. Although Herring Run generally looks unpretending, yet in comparison with Jones' and Gwynn's Falls and the Patapsco, the former, during a freshet, is equally destructive to property as the latter three.

The occupants of the Ridge, laying west of the Belair Road, are generally Americans; their lands are highly cultivated, and the society equal in intelligence to any community in north Maryland; churches, schools, grist mills and workshops abound.

East of the Belair Road the Ridge is principally settled by a community of worthy Germans and Dutch, who by extraordinary industry and economy, have made their little farms to blossom like the rose. Those men made the purchase less than twenty years since at an average of ten dollars per acre; now, offer them less than three hundred, they will exclaim, "yaw, yaw, you's a tam gut man!" In honor to those Europeans, I propose that Herring Run be called the Elbe, a river having its source in a small portion of Bohemia, but principally from the central portion of Germany, which we all know passes by Hamburg and empties into the North Sea or German Ocean. Between the Harford and Belair Roads, laying south of Herring Run, are several other ridges suitable for homesteads. These, if I am not mistaken, form a portion of the magnificent estate of Johns Hopkins, Esq., the Girard of Balti-

more. With the exception *probably* of "Gallows Hill," where malefactors were executed previous to our time and generation, I move that the latter ridge be called Prospect Hill. All those changes of names I suppose must be left to the discussion of our worthy fathers in the Council and Legislature. In the centre and foot of the ridge laying between the Belair and Philadelphia Roads, and on the north bank of the Herring Run, is the elegant mansion and farm belonging to Mrs. Deborah S. Corse, and laying south and adjoining the same the Firley Nurseries, one of the most extensive and best managed establishments of the kind in the United States. It is now under the control of the indomitable Robert S. Corse, and forms part of the estate belonging to Mrs. Corse. West of those nurseries and binding on Sinclair's Lane is the Waterloo Ridge; on the north of the lane are the farms of Mr. Wempe and Mr. Clagett; from the apex of the ridge looking south is almost an exact picture of the battle field of Waterloo. Imagine in the centre of the field a deserted old fashioned French chateau (haunted of course,) and near by an immense mound surmounted by the Belgian Lyon, and you have, in your mind's eye, Waterloo to a nicety. It is said the mound covers the remains of the slain of both armies. I opine, however, English farms cover the remains in the shape of bone dust. A walk of ten minutes from the terminus of the Red Line city cars, on the Belair Road, will land you on the field. As regards the plan of battle, old Blucher's timely advance and charge, I refer to history. South of Waterloo ridge are two other ridges running nearly three miles east of Belair Avenue, and form portions of the farms owned by Mr. Brundige, the late Col. Bryden, Madam Goldsmith, the late Capt. Dungan, Mrs. Dr. Wright, Mr. Sinclair, Col. Bradford, Admiral Joshua Horner and others. Those lands are held at three, five and eight hundred dollars per acre, generally at the medium figure.

By the way, almost overlooked Loudenslager's Hill, situated on the extreme east of the city, on the highest point of which the Patterson Park is located, the approaches to this Hill are similar to that of Breed's or Bunker's Hill, but of greater extent. It is hallowed ground, and the spot where our boys expected to have a lively fight with the British in 1814, under the command of Gen. Ross; they made no attack, however, hoping to find a more healthy climate below New Orleans. On the right is the New Alms House, dignified by the name of Bay view Asylum, and on the left the Maryland Hospital.

All the ridges named (except where wood lands intervene,) command a view of the city, the Patapsco River and Chesapeake Bay. When the wind is favorable the chiming of the city bells are distinctly heard from the most distant points of the land de-

scribed. To go and return from the ducking and fishing shores on the Patapsco River requires a run of about five hours.

#### WASHINGTON CITY HOMESTEADS.

It has been upwards of forty years since I visited the plantations on the Patuxent River, consequently I am altogether guided in my remarks by hearsay and the map of the State of Maryland. Prince George's county being nearest to the Capitol, I suppose most of the homesteads will be located in that county, near the Patuxent River and Baltimore and Potomac Railway. As regards society, there is no better to be found in the United States; churches, schools, stores, shops, grist mills, game, shad and other fish, oysters, etc., abound. The present high rents and price of provisions in the city will no doubt induce hundreds of gentlemen who hold office under government to locate on the Patuxent, where they can realize a gain of fifty per cent. off their expenses, enjoy pure country air and every luxury.

We are told that shad (and I suppose other fish) are so filled with phosphorus that they are conducive to brains (and beauty)—a commodity sadly deficient in our present Congress. In looking over the *Prince Georgian*, of March 25, sent to me by a friend, I notice a very able address delivered before our Legislature by Mr. Roosevelt, of the city of New York, on the subject of Fish Culture. I take the liberty to copy his concluding remarks, so complimentary to our people, particularly our Baltimore ladies. He says:

#### SHAD FOR BRAIN AND BEAUTY.

"The principal shad and herring rivers are the Potomac, the Susquehanna and the Patuxent, but with proper management these fish may be made to run in all the others. Now, it is said, on the authority of Agassiz, that fish food is the nourishment of the brain; that the phosphorus it contains goes directly to supply the waste of that important organ, without which man feels quite at a loss. The same philosopher states that it is from this cause that the inhabitants along the coast are highly intellectual. Hence, the Marylanders, who are so peculiarly favored in this particular, must be a wonderfully gifted, talented and well educated people; if, however, there is any doubt about this, I can only say that the ladies of Baltimore are proverbially the prettiest women in America, which is almost as fortunate for them as if they were as strong-minded as Susan B. Anthony or Elizabeth Cady Stanton. For myself, I am suffering at present from the want of fish food, or you would find this address more entertaining; the fact being that fish are so dear in New York at present that a man can hardly afford to have any brains."

—•••••  
PLOWMAN.

Josh Billings think mosquitoes must be very cheerful creatures, for they are always singing as they toll.

#### HORIZONTAL CULTIVATION.

To the Editors of the *Maryland Farmer*:

By your description in the February number of the *Maryland Farmer* of an invention for harvesting potatoes, and not doubting but when constructed it will prove a success, it follows that a machine for drilling potatoes will be sought after. Small farms and higher cultivation is now the motto, and from the fact that farmers in this latitude and south of it merely grow a family supply of potatoes, the machine ought to be constructed in a very simple manner and sold at a low figure, or let it be a combined machine, made with three hoppers; the centre hopper for corn, potatoes, beans, &c., and the three hoppers for drilling wheat and other cereals. By examining the wheat and corn drills as now constructed, any man of ordinary skill and ingenuity can make said (donkey) machine. There ought to be a false hopper made, holding about three pecks of potato sets, and set in the centre hopper, and inside of the same an inclined shelf to prevent the sets from crowding the cylinder. To construct a potato drill to perform successfully, the sets must be of uniform size, and cut with a little steel spoon or instrument called the potato scoop, three-quarters of an inch in diameter, and made with a sharp edge and similar to a mustard spoon, each set having one strong, healthy bud. I have planted whole potatoes, halves, quarters, sprouts and sets with single buds. The latter proved most productive. When cut, the sets ought to be spread out in a dry, airy, dark loft, or slightly covered with dry sifted ashes; after laying a week or less they will assume nearly a round shape and ready for planting. The remains of the potato ought also be spread out to harden, then housed for family use or for the stock.

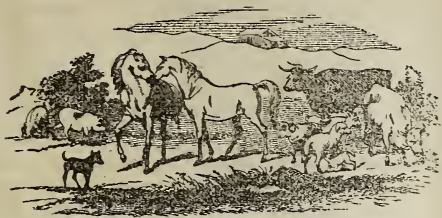
A man with one horse can drill, cover and roll six acres of potatoes per day, and corn, about ten acres. Query.—How many men and horses would be required to do the same work by hand?

I head this article "Horizontal" because I believe it to be, all things considered, the best mode of cultivation. ECONOMY.

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WINE IN CALIFORNIA.—The wine trade of California promises to be one of its greatest sources of wealth. The entire State, 600 miles long and 130 miles broad, is suitable for cultivating the vine, except in those section where the land is over 3000 feet above the level of the sea. From Oregon to San Diego the grape is grown. In 1864 it was calculated that 12,000,000 vines bore fruit, and the increase has probably been 4,000,000 vines a year. To-day there are at least 30,000,000 vines, covering about 42,000 acres. The amount of wine which competent authorities think might be made if all the grapes were used for the vintage, would be 30,000,000 gallons. One wine-maker alone produces 450,000 gallons.



## Live Stock Register.



### CATTLE FEEDING.

The continental correspondent of the *Prairie Farmer*, in an interesting communication regarding the conductors of the experimental farms in Germany, says that these experimentalists have been occupied for fifteen years with the question of the connection between the food supplied to black cattle, sheep and swine, and its transformation into muscle and fat. They have by long-continued and close observation been endeavoring to fix the conditions by which an animal can assimilate, in the shortest time, the largest amount of fatty and nitrogeous matters, from certain articles of food. In the economizing of forage, nothing was gained after a certain point, by increasing or diminishing the supply. In the case of wheaten straw, 26 per cent. of its primary matters were absorbed, and in the case of upland hay 60 per cent. probably. The mean average of the substances assimilated from wheaten, oatens, bean straws, clover and natural hay, was 50 per cent. An alteration in the dietary produces, during some days, a depressive action. Wheaten straw took longer to digest than clover hay, and the latter longer than meadow hay. It was five days before the last traces of the old food had disappeared in the excrement, after the commencement of a new diet. One point in these experiments is of great value, as showing that fattening stock should not be changed suddenly from one kind of diet to another, and another matter of equal importance is, that they should be kept from undue excitement, and as quiet as possible. The relative value of some of the principal articles of forage, as determined some years ago, is as follow:

One hundred pounds of good meadow hay is equal to—

- 45 lbs. peas or beans; or, 153 lbs. pea straw.
- 46 lbs. wheat; or, 164 lbs., oat straw.
- 54 lbs. rye; or, 167 lbs., wheat, pea and oat chaff.
- 57 lbs. corn; or, 169 lbs., rye and barley chaff.
- 59 lbs. oats; or, 201 lbs., raw potatoes.
- 64 lbs. buckwheat; or, 275 lbs. green Indian corn.
- 68 lbs. acorns; or, 339 lbs., mangold wurtzel.
- 105 lbs. wheat bran; or, 442 lbs., rye straw.
- 109 lbs. rye bran; or, 504 lbs., turnips.

The value of rye straw is evidently a misprint, the relative value of straw and chaff has been found

practically to be to hay as 200 of the latter to 100 of the former.

According to an analysis of Prof. Johnson, 100 pounds of fine wheaten flour and shelled or hulled oats, contain:

	Wheat, lbs.	Oats, lbs.
Muscular matter.....	10	18
Fat.....	3	6
Starch.....	50	65
Total.....	63	89

We consequently see why fast working horses should be fed on oats. It gives muscular power, and it is probably the reason why the stalwart Highlander, reared on this simple and nutritious fare, should show such powers of endurance and corporeal strength.

It is said of Dr. Johnson, the great English lexicographer, that he defined oats to be food for horses in England and men in Scotland. A canny Scot, who overheard it, promptly answered and where will you find such *men* and such *horses*.

### Successful Experiment in Soiling Cows.

We have obtained from a subscriber of Cumberland county, New Jersey, an account of what we consider a very satisfactory experiment with soiling. He sowed three acres of corn in drills, early in the spring, at the rate of  $2\frac{1}{2}$  bushels to the acre, and allowing about 30 grains to the foot. The covering was done by the plow, leaning it over on the mould board side. On this sowed corn, six cows were kept from the 13th of 7th mo. to the 19th of 10th mo.—After strawberries were over, a strawberry patch of  $1\frac{1}{2}$  acres was ploughed up and sown with corn in the same way as the first. On 11th mo. 1st, eight additional head of young stock were put into the yard, and fed with the fodder, which has lasted till the 1st of 2d mo., 1870, sustaining up to that period the 14 head.

Before the corn was ready to cut, the soiling was commenced, by feeding the cows, from  $\frac{3}{4}$  acre rye and 1 acre sown oats; the first feeding of the rye being on the 6th of 5th mo., and there was a second growth of it ready for use on 19th of 6th mo. Here were  $4\frac{1}{2}$  acres sown corn, and  $1\frac{1}{2}$  acres rye and oats— $6\frac{1}{2}$  acres in all,—sustaining 6 head of stock from 5 to 6 mos. to the middle of 1st mo., 1870, besides eight heifers (which might be considered equal to four full grown cows), for a period of about five months; making an average at least of ten head supported for over 6 months, on 6 acres of ground,—or five head for 12 months. Under the ordinary system of pasturage in the open fields, about three acres of ground is allotted for the summer and winter support of a cow.

One of the most interesting features of the experiment to us, was the reluctance of the cows to leave their yard, from which they had to be forced out,

and would run back to it with a will, at the first sight of gates open or bars down.

They continued healthy and thrifty through the season, keeping well up to their milk, to within a few days calving—one had just come in.—*Practical Farmer.*

### THE ROT.

A subscriber at Guilford Station, Va. writes us for information as to the cause and cure of Sheep Rot. We reply by publishing the following from a volume on "The Diseases of Sheep, Explained and described, with proper remedies to prevent and cure the same," by Henry Clok, V. S. Published by Claxton, Remsen & Haffelfinger, Philadelphia, which we advise all interested in sheep raising to procure. For sale by Cushing & Bailey, Baltimore, at \$1.25 :

The rot, or dropsy, is a common disease, which attacks many sheep of a flock, and often does great damage. It is analogous to "fluke," which has been described. A sheep which has been affected with rot can be recognized even at a distance by its languid, lazy walk, its hanging ears, and by the rocking of its head. The animal lags behind the healthy ones, eats but little, is easily caught without offering resistance, and bends its back so as to form a deep hollow when the least pressure is applied. The eyes are pale and without lustre, the winking membrane white and destitute of red veins, and the eyelids bloated. The gums, the lining membrane of the mouth and the external skin are pale. The wool loses its curl, becomes tangled, dull and lustreless, and may be pulled out in large tufts. The digestion is more or less impaired, and diarrhoea is mostly present. As the disease increases, a painless swelling forms gradually on the upper part of the neck near the sub-maxillary glands, which slowly increases in size. The patient loses flesh and becomes weak and languid, the appetite diminishes, the rumination ceases entirely, and the animal suffers much from thirst. The eyes run with mucus, the gums are spongy, bloated and bleed easily, the belly swell up on account of the water which collects in it. The animal wastes away to a mere skeleton, lies down constantly, has an offensive diarrhoea, and finally dies. The duration of the disease varies. Sometimes it lasts only eight or ten weeks, and sometimes a whole year elapses before death puts an end to the suffering.

In the dead body much water is found under the skin, and generally in the pericardium and in the belly. The blood is pale, thin and watery, and all the viscera, especially the heart, are pale and flabby.

The rot is produced by many causes, some of which, however, have not been as yet sufficiently investigated. It is most common in wet years, and is caused by vitiated food or grazing on marshy, sour meadows. After very wet summers, the rot generally appears late in autumn, continues during winter and spring, and sometimes destroys whole flocks in the following summer. Marshy meadows seem to be much less injurious in spring than in fall.

It may be taken for granted that different injurious influences acting together are required in order to produced the rot.

The cure of rot rarely succeeds, and can only be expected when the disease is not too far advanced.

The prevention is therefore of much greater importance. All the above mentioned injurious influences should be avoided, the animals kept away from low, marshy and moist pasture-grounds, and should receive good, wholesome food, especially hay, etc., when in the stable. Particular care must be exercised in wet years. The sheep should be kept in the stable during rainy and foggy weather, and should not be turned out to graze too soon. From time to time salt-licks of pine oil, tar, wormwood, calamus-root and juniper-berries should be given. To cure rot when it has once broken out a very careful diet must be observed. Great care must be had to provide good hay, groat-drinks and grain food. The residue of whisky distillation, given in portions of twelve pounds a day, is said to be excellent. The use of medicines is also necessary, and they are most conveniently administered in the form of salt-licks. For one hundred sheep the following mixture is made into a lick and given twice a week : Calamus-root, or wormwood and juniper-berries, each three pounds, common salt one and a half pounds, and a quantity of groats. Or the following : Mustard one pound, and juniper-berries and salt each two pounds, with groats. The use of these remedies must be continued for a considerable time. If the disease is already in its advanced stages, it is well to abandon the cure, since the meat may be eaten without injury.

STEAMING FOOD  $\frac{1}{2}$  FOR STOCK.—G. Wood, Putnam county, New York, writes us as follows—and we are pleased to observe that cooking or steaming food for live stock is more and more appreciated. This is one of the innovations sure to come. The letter is addressed to the *Practical Farmer*, and says :

"I have commenced this winter to steam for a stock of 43 head. I use a 5 lb. P. portable engine to saw wood, thresh, grind grain, and cook the food for stock. I have invested some \$2,000 in apparatus, and after two months' experience am satisfied with the result. Although I have read everything I could find on the subject for the past two years, I am inclined to think I can learn much yet both from the experience of others and my own daily experiments."

RESOURCES OF THE SOUTH.—The New York *Day Book* furnishes some Custom House figures to prove the strength of the South in her prolific natural resources and wonderful vitality. With less than one-third the population of the Union, and amid all her trials and abject poverty, the South furnishes, in 1869, exclusive of specie and bullion, one-half the entire exports of the country. The entire exports were \$571,038,649, exclusive of \$42,915,968, specie. Of these results of Agriculture, the South furnished \$191,012,639 ; or nearly ten millions more than the industrial products of the balance of the Union. The total imports of the country for 1869 were \$413,954,615. If we allow one-third of this for the South, and that is really too liberal, she would show a balance of trade in her favor of \$54,027,768, while the balance against the other stand at \$96,948,734.



## USEFUL RECIPES.

**HOW TO FATTEN A POOR HORSE.**—Many good horses devour large quantities of grain or hay, and still continue thin and poor; the food eaten is not properly assimilated. If the usual feed has been unground grain and hay nothing but a change will effect any desirable alteration in the appearance of the animal. In case oil meal cannot be obtained readily, mingle a bushel of flaxseed with a bushel of barley, one of oats and another bushel of Indian corn, and let it be ground into fine meal. This will be a fair proportion for all his feed. Or the meal or the barley, oats and corn, in equal quantities, may first be procured, and one-fourth part of oil cake mingled with it when the meal is sprinkled on cut feed.

Feed two or three quarts of the mixture two or three times daily, mingled with a peck of cut hay and straw. If the horse will eat that greedily, let the quantity be gradually increased until he will eat for six quarts at every feeding three times a day. So long as the animal will eat this allowance, the quantity may be increased a little every day. But avoid the practice of allowing a horse to stand at a rack well filled with hay. In order to fatten a horse that has run down in flesh, the groom should be very particular to feed the animal no more than he will eat up clean and lick his manger for more.

**INFLUENZA IN HORSES.**—In the treatment of influenza, the strength of the patient must be supported. If what has been called heroic treatment is resorted to, viz., bleeding and purging, influenza proves a very fatal disease. From the beginning the strength of the animal must be sustained. The horse should be placed in a comfortable airy box or stable, and the body clothed according to the state of the temperature. It is generally advisable to give stimulants and tonics from the first as a quart of good beer three times a day, in which might be mixed one ounce of nitrous ether. The bowels should be open gently by means of clysters, and if the throat is very tender a stimulating embrocation should be well rubbed into the submaxillary space, or head of the windpipe. Of course many of the stimulants used in veterinary practice are useful in influenza, but we just mention such as can be easily procured. The horse should also be encouraged to take food that is easily digested, and the clothing should be removed at least twice a day, and the body well rubbed over. As recovery takes place slowly it is greatly expedited by the use of tonics.

**SPAVINS AND SPLITS.**—Put into a large mouthed bottle six ounces of oil of origanum; two ounces gum camphor; two ounces mercurial ointment; one ounce tincture of iodine. Melt by putting the bottle into cold water and heating the water after the bottle is put in it. Apply twice, daily, on splints; three times, daily, or spavins, for four or five days.

**TO TRAIN A HORSE TO STAND.**—Take your horse on the barn floor and throw a strap over his back and fasten it to his right fore foot; lead him along and say "whoa" at the same time pull down the strap which throws him on three feet and makes him stop suddenly. This the best way known to teach whoa, though you can put on the war bridle, and say whoa, and give him a sharp jerk that will stop him about as soon as the strap to his foot. Then put him in harness with the foot strap, as directed to do under the head of "training to harness," and drive him up to the door. The moment he undertakes to move, take his foot and say whoa. Get in your carriage and get out again; rattle the thills, make all the noise getting in and out you can; give him to understand, by snatching his foot each time he moves, that he must stand until you tell him to go; and after a few times you can put the whole family in the carriage and he won't stir out of his tracks.—*Above from American Stock Journal.*

## The State Agricultural College—Annual Meeting of the Stockholders.

The stockholders of the Maryland Agricultural College held their annual meeting on Wednesday, April 13th, at the office of Messrs. John Merryman & Co., Fayette street, near Charles.

Mr. J. Howard McHenry was called to the chair, when the following trustees were elected. Messrs. A. B. Davis, C. B. Calvert, Dr. E. J. Henkle, Allen Doge, John C. Walsh, James T. Earle and J. Howard McHenry. There were thirty-five hundred votes represented at the meeting.

The Hon. Allen Bowie Davis, president of the board of trustees, submitted the annual report of the president of the faculty, Rev. Samuel Regester, which he said he adopted as his report of the financial condition of the college. The whole amount of indebtedness of the institution at the date of Admiral Buchanan's resignation, as nearly as can be ascertained, was \$6,150.78. Of this amount \$5,037.40 have been paid, leaving a balance of \$1,113.38. This balance includes the "Libby judgement" of \$587.61, which we will pay on demand. The following amounts have been paid for improvements and repairs to the property. New gas works, \$600; new gas-house, \$219.28; gas-fitter's bill \$179.42; repairs to roof of college, \$44.45; repairs to pump, &c., \$37.70; repairs at cottage, \$55.93; new stove and pipes in wash-house, \$28; repairs to furnace, &c., \$29.25; locks and keys for students rooms, \$135.40; repairing clock, \$5; repairing iron bedsteads, \$31—making a total of \$1,335.43. These improvements are solid and will last for many years, so that no similar expense will be required for a long time. The iron bedsteads now ready for use will accommodate twenty-five or thirty additional students.

There was paid for additional stock of books &c., for students, chemicals, table ware, settees and chairs, and bedding, the sum of \$1,025.70, showing a total payment for the foregoing accounts of \$7,428.53, including \$5,037.40 for old debts and \$1,855.43 for improvements, &c. These were debts paid independent of the current, necessary and ordinary expenses, all of which have been or will be promptly paid. The following is an exhibit of the ascertained and estimated liabilities and resources up to July 1st, proximo. The liabilities were: Balance of old debts, \$1,113.38; due "standing fund," \$800; due for glass and glazier's services, \$25; due Messrs. Wood & Co., for stoves \$168.45; due Mr. Sheriff, for coal, \$189; due for books, \$26.80; due president's salary, \$1,000; due four professors' salaries, 2,600; due Major Soper's salary, \$75; due registrar's salary, \$320.54; due employees to July 1, \$600; estimate for coal to July 1, \$130; estimate for bread to July 1, \$500; estimate for groceries, &c., \$1,413.61—total liabilities, \$8,262.87.

The resources up to July 1, were: Due from students, \$1,410.82; due for board of families of president and professors, \$807.50; due from State donation, \$5,000; due from rents, \$99.32; cash on hand and in bank, \$949.39—total of resources, \$9,266.53; liabilities, \$8,262.87; balance, \$1,003.66.

The above shows a balance in favor of the college, over all descriptions of liabilities, amounting to \$1,003.66. The report adds that from these data it is fair to conclude that the revenues of the college, under a proper and economical administration of its affairs, (assuming that an equal number of students shall be in attendance.) will exceed the ordinary expenditures by from five to six thousand dollars annually. There are ninety-six students on roll, and it is expected the number will exceed a hundred in a short time. The report was adopted and the meeting adjourned.

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## The Poultry House.

### HATCHING.

To the Editors of the Maryland Farmer:

Permit me to call the attention of the readers of the *Farmer*, at least those interested in raising poultry, to a statement made in the February number, p. 52. In an article on the "Habits of Fowls," the writer, copying from the *English Agricultural Gazette*, says:

"The chick until liberated from the shell by outside aid, is as incapable of motion as if it formed a solid with the egg, &c.," and again: "you might as well enclose a man in an iron boiler and tell him to get out without tools, as expect a chick to get out of the shell without help."

Now, I cannot tell anything about the variety of fowls the editor of the *Gazette* raises; probably they are of an aristocratic breed, from the fact of their not being able to help themselves; I can only say, that I have tried the ordinary American breed, probably descendants of stock brought over by the Pilgrim Fathers, and they were not so helpless.—During my residence in New York State—having always felt much interest in raising, fighting and eating poultry—a gentleman of my acquaintance, a Mr. Mickle, exhibited in New York a machine called an Eccaleobion, a square box about 4 x 4 x 4 feet, containing 8 draws or openings, in which eggs were put in, and, in about 21 days chicks come out—I did not examine to see if a hen was concealed. Some time after I went to a heavy expense in getting up a machine for hatching eggs, with the view of making it a business; said machine would contain many thousand eggs. However, I experimented with about 500, hatching most of them, fine healthy chicks, whose mothers did not know they were out. A healthy chick will break or pick the shell, which their increasing size severs. I have observed them closely, and feel satisfied that more chicks can be hatched and raised without, than with their ma's. A proper heat and sufficient moisture brings them out.

J. V.

PORK scrap or greaves is best fed, softened in hot water, chopped fine, and mixed with bran or boiled potatoes. If the cake is left for fowls to pick at, is as frequently the case, the pieces torn off are apt to swell after being eaten, and cause the fowls to be crop-bound.

It is advisable to set a hen at night, and without a light if she be a timid one. Eggs sprinkled with water, on the 14th, 17th and 20th day after they are set, well rarely have dead chicks in them, at the end of the time for incubation.

### DUCKS FOR PROFIT.

Why is it that our farmers, and fanciers, too, almost ignore the good qualities of the duck?

They are no more difficult to rear than chickens, if proper care is taken the first few weeks, and they mature *much* earlier. The common duck does not require *any* more care; but it is not to these that we specially refer. We do not see the advantage of raising ducks that weight two or three pounds at maturity, rather than those that will weigh six to eight. And there is just about that difference between the common duck and either the Aylesbury or Rouen varieties. It cost hardly if *any* more to raise an Aylesbury or Rouen than the common mud-puddle variety; and laying beauty (which is a great desideratum with us) aside, there is still the grain in weight as well as the grain in eggs the coming year.

Either of the above varieties is desirable, and the choice may be said to lie almost with one's fancy. Both are excellent layers, frequently commencing to lay in the fall and continuing until cold weather, recommencing in February or March, and not ceasing until July or August, and mature at about the same age reaching about the same weight, *sometimes* attains eighteen to nineteen pounds per pair. This weight, though, is *very rare*.

It seems to be the impression with many, that ducks cannot be kept except with a pond or stream on the premises. But this is a mistaken notion. True, a running stream, or when that is not to be had, a pond of water, is a great help, but it is not a *necessity*. We have known fine broods raised with a large tub or box sunk into the ground and filled daily with fresh water. A good way to do this is to excavate the ground under the tub to the depth of eighteen inches or two feet, and fill the hole up with stones; have a hole and plug right over the excavation, and the water will run off easily and freely, and not keep the ground around the tub continually muddy.

"But they eat so much," is the reply; "why, half a dozen ducks will eat a half bushel of corn a day." Now, reader, did you ever compare *critically* the amount consumed respectively by a duck and a hen? If not, do so, and you may discover less difference than you persuaded yourself there was. The idea of ducks eating so much is a good deal like the Dutchman's pig. Hans had one leetle pig no pigger dan von cat. He give ter leetle pig von pail of swill; piggy eats ter swill all up; den he puts him in ter pail, and he no fill ter pail half full.—A. H. HALSTEAD in *Rural Carolinian*.

BEAR in mind that prize fowls almost always throw some birds which should never be seen in the exhibition room.



## How Water gets into Tiles.

Just lay twenty or thirty rods of tiles and make the joints as tight as possible, then let a stream of water into the tiles and dam it up at the lower end, and see how fast the water will flow out from the joints between the tiles. Now, when the tiles are laid in the ground, and they are surrounded with water, the water will rush into the tiles through the joints nearly or quite as fast as the water in the other case would rush out of them. But perhaps, you mean to ask how the water in the land gets to the underdrain. In sandy or gravelly land it gradually soaks through the particles of soil for several rods on each side of the drain. But to many people it is a mystery how water can soak through a tenacious clay three or four feet deep to the tiles. Wet clay as it dries, contracts, and seams or pores are formed. You will observe this on a piece of wet clay land. In the dry weather of summer it splits open into cracks, not unfrequently an inch wide.—Well, when you put tiles into such a soil, the water drains away for a few inches on the bottom and sides of the ditch, and as the land becomes dry it cracks open, and the water from the adjoining land flows into these cracks and through them to the tiles. As more land dries, more cracks are formed, and so on until the whole soil, if the drains are sufficiently numerous, becomes full of these small fissures. When these are once formed they will always continue open, and water will pass off rapidly.—*American Agriculturist.*

THE PEA-WEEVIL.—The Pea-weevil (*Bruchus pisi*) might easily be kept down to a moderate number, if pea-growers could be moved to adopt a right method. I never plant a pea with a live weevil in it. I keep the peas two years, then, of course the weevil is dead; and I take care that they do not escape before they die; consequently, instead of having a bug in every pea, and eating as many bugs as peas, a large number of the peas are free from them, and are, therefore, pleasanter in idea, if not in taste; and we have some finer seed than we should have if we planted bugs as well as seed.

As our neighbors cannot endure to provide seed two years in advance, they all plant bugs or let their bugs escape; and, consequently, we are supplied with bugs from their gardens; but we do not have them so soon, nor in such numbers, as we should have by the usual plan. I dry the seed peas until I think they will not mould, and then I put them in bags and hang them up in an airy place, taking care to tie the mouth of the bags close. Then, that they may not become too dry about Christmas, I put the peas into bottles and cork them, and let them remain until the second spring afterwards. The peas are not in any way injured by being two years old. I have had three year old peas grow very finely.—*Am. Etomologist.*

## WHITEWASHING.

Good whitewash, well-applied to fences, rough siding, and the walls, and ceilings of buildings, has a highly sanitary influence, as well as being in the highest degree antiseptic and preservative in its effects. To be durable, withewash should be prepared in the following manner:—Take the very best stone lime, and slack it in a close tub, covered with a cloth to preserve the steam. Salt—as much as can be dissolved in the water used for slacking and reducing the wash to the requisite degree of fluidity—should be applied, and the whole mass carefully strained and thickened with a small quantity of sand, the purer and finer the better. A few pounds of wheat flour mixed as paste, may be added, and will give permanency and durability to the mass, especially when applied to the exterior surface of buildings. With pure lime, properly slacked and mixed with twice its weight of fine sand and sifted house ashes (oak or hickory is to be preferred,) in equal proportions, almost any color may be made by the addition of pigments. Granite, slate, freestone and other shades may be imitated, and without any detriment of the durability of the wash. This covering is very often applied and with good effect, to underpinning, stone fences, roofs and the walls of barns, and other out-buildings. Probable, however, the pure whitewash is more healthy than the colored, as its alkaline properties are superior, and when used in cellars, kitchens and sleeping apartments, produces salutary results. No person who regards the health of his family, should neglect to apply a coat of it every spring. Country places, especial farm out-houses, fences, &c., are greatly improved in appearance by an annual coat of good whitewash, and will add to their permanency from twenty-five to thirty-three per cent.—*Ed. Germantown Telegraph.*

LEACHED ASHES AS A FERTILIZER.—An exchange reports the remarks of Mr. Quinby at a meeting of the Rochester Farmers' Club, as follows: "Leached ashes are good for all crops—for corn in the hill, and especially valuable as top dressing for wheat and clover fields, and meadows generally. During the past three years he had drawn 10,000 bushels on his farm, which he spread on land at the rate of 200 to 300 bushels per acre. He covered forty acres in this way, and meant to ash the entire farm. They had doubled his wheat crop and wonderfully increased his crop of grasses, especially clover. Land which had been run down too much to seed with clover, produced heavy crops when manured with leached ashes. He got a good catch of clover where he applied leached ashes last year on his wheat and rye, while the balance was a failure. He could see a great difference in the growing wheat where the land was manured with ashes and where it was not."

## The Dairy.

### SALT IN BUTTER MAKING.

A correspondent of the *Country Gentleman* throws out a suggestion which we have no doubt has often occurred to Dairy Farmers. For our own part we have long been satisfied that the quality of butter and its keeping properties is very largely dependent on the use of pure salt. Much of the salt in common use contains ingredients in a greater or less quantity which are deleterious to the purity of butter. Whether Ashton salt or any other is used is really of no consequence provided that it is of superior quality.—[*Editors Maryland Farmer.*]

The letter alluded to is as follows:

*Messrs. Editors*—I think that the salt has more to do with good and poor butter than many writers are willing to allow. With your permission, I will tell my experience in making butter from a small dairy. I never use water to wash the butter or to warm the cream, using new milk, lukewarm—one quart of salt to four quarts of cream; let the cream stand four or five days, stirring it every day. When the weather is warm, put the cream down the well (half the length of pail in water, with a rope kept for the purpose) the night before churning.

Allow  $1\frac{1}{2}$  ounces of salt to one pound of butter, well worked in. Let it stand 24 hours; then work over, the next day, ready for packing, always with as little working as possible to get out the butter-milk. Use Ashton salt, if procurable. I have followed this rule for 15 years and never had poor butter. The past season, however, I could not get Ashton, but Ashton factory filled, which is not good for butter, and my butter is not as good as common. After packing one jar for winter, I bought ground rock salt for salting the rest of the butter, always filling the jars within two or three inches; then spread on a cloth and fill with salt.—Last week, on opening the first jar, the butter was rancid, while the other jars when opened were as sweet as when packed.

The cows have good pasture and pure water in the pasture. I think the salt is the cause of more poor butter in our markets than all other causes put together.

### What is a Good Cow?

A writer in a recent number of the *Galaxy* gives the following general hints regarding the selection of a good cow for milk producing:

"First. Health, good constitution, or digestive apparatus, for which we require a capacious belly.

"Second. That the largest possible development of the animal should be behind, indeed the udder and parts adjacent. A good cow is likely to be wedge-shaped, of which the head is the smallest end. Big heads, or horns, or shoulders, are not desired, because they have to be nourished by the food. But these are indispensable; a large bag and hindquarters to support and minister to it.—What do our milkmen look for in selecting milk-giving cows? The first appearance, to a judge, will convey an impression as to the health or constitution of the cow. He will ask, also a bony frame, one that does not steal the fat from the milk; and he will feel the skin, to find it flexible and covered with close, softish hair; he will ask for good lung

room, a capacious belly, a wide rump, and well-developed bag, covered with hair. Extending from this bag forward, he will be desirous to see prominent the two great veins which lose themselves in the belly; and on the back of the udder he will look for many, well-defined branching veins. Then comes Guenon's 'milk-mirror,' which is a broad strip of hair running up from the udder to the vulva, which is considered the one thing needful; but which has not in this country been found an infallible test, though it is a good one. If, in addition, the cow is gentle, good tempered, you are almost sure of a milk-maker."

### How to Test the Richness of Milk.

It is of no little importance to have at hand a convenient and reliable mode of testing the richness of milk. This is usually done by the mere rule of "guess." We will give a more reliable way, within the reach of all, and one whereby any person may safely govern himself in deciding upon which of any number of milkmen he will patronize, or of which of any number of cows he will purchase.

Procure any long glass vessel—a cologne bottle or a long phial. Take a narrow strip of paper, just the length from the neck to the bottom of the phial, and mark it off with 100 lines at equal distances; or, if more convenient, and to obtain greater exactness, into 50 lines, and count each as two—and paste it upon the phial, so as to divide its length into a hundred equal parts. Fill it, to the highest mark, with milk fresh from the cow, and allow it to stand in a perpendicular position 24 hours. The number of spaces occupied by the cream will give you the exact per centage in the milk, without any guess-work.

Now, if you wish to carry the experiment further, and ascertain the percentage of butter in your cream, set the milk in a large dish, and collect, say 100 or 200 ounces of cream; make your butter, and you will know the percentage of butter in the cream by ascertaining the number of ounces of butter you have made from it. Thus, if 100 ounces of milk give 10 ounces of cream, and 10 ounces of cream give five ounces of butter, you will know that one 100 ounces of milk will give five ounces of butter.

Such experiments are worth being made, and made carefully. In no other way can you know what you have in a cow or milk, or what you are buying. In this way also you may test the exact nutritive value of different kinds of milk from your cows—a very important matter. Farmers may derive much benefit by making a few simple experiments, now and then. They need not interfere with any of the regular duties of the farm; and nothing but a spirit of habitual indolence of thought and action will keep them from doing so. Such experiments often lead to important results, and evoke interesting and instructive facts.—*Exchange.*

OF INTEREST TO FARMERS AND GARDENERS.—The commissioner of internal revenue has decided that farmers and gardeners who sell only the product of their own farms and garden from their wagons along the streets, wherever they can obtain permission to temporarily place them, having no regular place upon the street for their wagons where their customers may expect to find them, but changing their location, standing one day in one place and another in another, do not by so doing render themselves liable to special tax as produce brokers.



## Ladies Department.

### SUN AND RAIN.

A young wife stood at the lattice-pane,  
In a study sad and "brown,"  
Watching the dreary, ceaseless rain,  
Steadily pouring down—  
Drip, drip, drip,  
It kept its tireless play;  
And the poor little woman sighed, "Ah, me!  
What a wretched, weary day!"

An eager hand at the door,  
A step as of one in haste,  
A kiss on her lips once more,  
And an arm around her waist;  
Throb, throb, throb,  
Went her little heart, grateful and gay,  
As she thought, with a smile, "Well, after all,  
It isn't so dull a day!"

Forgot was the plashing rain,  
And the lowering skies above,  
For the somber room was lighted again  
By the blessed sun of love;  
"Love, love, love!"  
Ran the little wife's murmured lay;  
"Without, it may threaten and frown if it will;  
Within, what a golden day!"

### MY HUSBAND'S SECOND WIFE.

#### A WOMAN'S REVELATIONS.

My husband came tenderly to my side.

"Are you going out to night, love?"

"Of course I am."

I looked down complacently at my dress of pink crape, dew-dropped over with crystal, and the trails of pink azalias that caught up its folds here and there. A diamond bracelet encircled one round white arm, and a little cross blazed fitfully at my throat. I had never looked better, and I felt a sort of girlish pride as my eye met the fairy reflection in the mirror.

"Come, Gerald, make haste! Why, you haven't begun to dress yet!"

Where were my wifely instincts, that I did not see the haggard, drawn look in his features—the fevered light in his eyes?

"I can't go to night, Madeline—I am not well enough."

"You are never 'well enough' to oblige me, Gerald. I am tired of being put off with such excuses."

He made no answer, but dropped his head in his hands, on the table before him.

"Oh, come, Gerald," I urged petulantly; "it is so awkward for me to go alone *always*!"

He shook his head, listlessly.

"I thought perhaps, you would be willing to remain at home with me, Madeline."

"Men are so selfish!" I said plaintively; "and I am all dressed. Claudia took half an hour for my hair. I dare say you'll be a great deal quieter without me—that is, if you have determined, not to go."

No answer again.

"Well, if you choose to be sullen, I can't help it," I said, lightly, as I turned and went out of the room, adjusting my bouquet-holder, the tube-roses and heliotropes seeming to distil incense at every motion.

Was I heartless and cruel? Had I ceased to love my husband? From the bottom of my heart, I believe that I loved him as truly and tenderly as ever wife did; but I had been

so spoiled and petted all my brief, selfish life, that the better instincts were, so to speak, entombed alive.

I went to the party, and had my fill of adulation and homage, as usual. The hours seemed to glide away, shod with roses, and winged with music and perfume; and it was not until, wearied with dancing, I sought a momentary refuge in the half-lighted tea-room, that I heard words wakening me, as it were, from a dream.

"Gerald Glen!"

I could not well be mistaken in the name—it was scarcely common-place enough for that. They were talking—two or three business-like looking gentlemen, in the hall without; and I could catch, now and then, a fugitive word or phrase.

"Fine, enterprising young fellow!"—"Great pity!"

"—Totally ruined, so Beese & McMorken say!"—"Reckless extravagance of his wife!"

All these vague fragments I heard; and then some one said, "And what is he going to do now?"

"What can he do? Poor fellow! I am sorry; but he should have calculated his income and his expenses better."

"Or his wife should. Oh these women! they are at the bottom of all man's troubles!"

And they laughed. Oh, how could they? I had yet to learn how easy it is, in the world, to hear other people's troubles!

I rose hurriedly up, with my heart beating tumultuously beneath the pink azalias, and went back to the lighted saloon. Mr. Albany Moore was waiting to claim my hand for the next dance.

"Are you ill, Mrs. Glen? How pale you look?"

"I—I am not very well. I wish you would have my carriage called, Mr. Moore."

For I now felt that home was the proper place for me.

Hurried by some unaccountable impulse, I sprang out the moment the carriage wheels struck the curb-stone, and rushed up to my husband's room. The door was locked; but I could see a light shining faintly under the threshold. I knocked wildly and persistently.

"Gerald, dear Gerald! for heaven's sake let me in!"

Something fell on the marble hearth-stone within, making a metallic clink, and my husband opening the door a little way. I had never seen him look so pale before, or so rigid, yet so determined.

"Who are you," he demanded, wildly. "Why can you not leave me in peace?"

"It is I, Gerald—your Madeline—your own little wife."

And I caught from his hand the pistol he was striving to conceal in his breast—its mate lay on the marble hearth under the mantel!—and flung it out the window.

"Gerald! would you have left me!"

"I would have escaped!" he cried, still half-delirious at all appearances. "Debt—disgrace—misery—her reproaches! I would have escaped them all!"

His head fell, like that of a weary child, on my shoulder. I drew him gently to a sofa, and smoothed him with a thousand murmured words—a thousand mute caresses! For had it not been all my fault?

And through all the long weeks of fear that followed, I nursed him with unwavering care and devotion. I had but one thought, one desire, to redeem myself in his estimation; to prove to him that I was something more and higher than the mere butterfly of fashion I had hitherto shown myself.

\* \* \* \* \*

Well, the March winds had howled themselves away into their mountain fastnesses; the brilliant April rain-drops were dried on bough and spray; and now the apple blossoms were tossing their billows of pinky bloom in the deep blue air of latter May.

Where were we now?

It was a picturesque little villa, not far out of New Orleans, furnished very like a magnificent baby-house. Gerald sat in a cushioned easy-chair in the garden, just where he could glance through the open window at me, working busily with my needle.

'What an industrious fairy it is!' he said, smiling sadly.

'Well, you see, I like it. It's a great deal better than those sonatas on the piano.'

'Who would ever have thought you would make so notable a housekeeper?'

I laughed gleefully—I had all a child's delight in being praised.

'Are you not going to Miss Delancy's croquet party?' he pursued.

'No; what do I care for croquet parties? I am going to finish your shirts, and you'll read aloud to me.'

'Madeline, I want you to answer me one question.'

'What is it?'

'What have you done with your diamonds?'

'I sold them long ago—they paid several heavy bills, besides settling half a year's rent here.'

'But, Madeline, you were so fond of your diamonds!'

'I was once; now they would be the bitterest reproach my eyes could meet. Oh, Gerald, had I been less vain, and extravagant—'

I checked myself, and a robin, singing in the perfumed depths of apple blossoms, took up the dropped current of sound.

'That's right, little red-breast,' said my husband, half jokingly, 'talk her down! She has forgotten that our past is dead and gone, and that we have turned over a new page in the book of Existence! Madeline, do you know how I feel, sometimes, when I sit and look at you?'

'No!'

'Well, I feel like a widower who has married again!'

My heart gave a little superstitious jump.

'Like a widower who has married again, Gerald!'

'Yes I can remember my first wife—a brilliant, thoughtless child, without any idea beyond the gratification of present whims—a spoiled plaything! Well, that little Madeline has vanished away into the past somewhere; she has gone away, to return to me no more, and, in her stead, I behold my second wife—a thoughtful, tender woman, whose watchful love surrounds me like an atmosphere, whose character grows more noble, and develops itself into new depth and beauty every day!'

I was kneeling at his side now, with my cheek upon his arm, and my eyes looking into his!

'And which do you love best, Gerald—the first or second wife?'

'I think the trials and vicissitudes through which we have passed are welcome indeed, since they have brought me, as their harvest fruits, the priceless treasure of my second wife?'

That was what Gerald answered me—the sweetest words that ever fell upon my ear.

**TRIMMING LAMPS.**—Some always use a pair of shears to trim their lamp wicks. I never do. A better way, and one which I invariably practice, is to pinch off the black crust with a piece of paper; you may keep a cloth for the purpose if you desire. You will find that the flame will be perfect in shape, and exactly in the center of the chimney, and also that the wick will last longer—quite a desideratum in the country, where I have known it to be necessary to harness a horse and drive to town for lamp wicks.—*A Farmer's Wife.*

Knives and forks are very little talked about, but are, nevertheless, in every body's mouth.

## VALUABLE HOUSEHOLD HINTS.

The annexed valuable information immediately connected with the duties and requirements of a housewife, is from Dr. Hall's *Journal of Health*.

The earlier the breakfast, the more work will be got through with during the day, and the better health will the household have, because food or warm drink in the stomach antagonizes the disease engendering damps, fogs, and miasma, which impregnate the air about sunrise, in all countries, especially in warm weather.

Potatoes may be kept a very long time from rotting, in a cellar protected against frost, by dusting the floor or bin with lime; then put down a layer of potatoes six inches thick; then dust with lime, another layer of potatoes, etc. One bushel or more of lime to forty of potatoes; they sprout least in the darkness.

Flannel shirts, or other woollens, should have grease spots removed without fulling them up, thus: Put one ox-gall in three gallons of cold water, in which immerse the garment, and squeeze or pound (not wring) it, until the spots are removed; then thoroughly wash in cold water, else the odor of the gall becomes very disagreeable.

If burning fluid or benzole are used to remove grease or other stains, let it be at least two yards from candles, gas, lamp or fire. Valuable lives are lost every year by neglecting this precaution.

Milk is kept good longer, if it is boiled, evaporated, condensed, or kept still at a temperature of about forty degrees. If heated three days in succession in summer, and two in winter, (as per Guy Lussac's experiments,) up to the boiling point, it will keep two months without souring.

**CARPET SWEEPING.**—Draw the broom to you with short, quick strokes, taking up the dirt every half-yard, in a dust-pan, or at each stair, and thus avoid working the dirt into the cleaner parts. Never use tea-leaves, paper or damp grass, to collect the dust, let the dust-pan do that.

Costive bowels have an agreeable remedy in the free use of tomatoes at meals—their seed acting the way of seeds of white mustard or figs by stimulating the coats of the bowels over which they pass in their whole state, to increased action. A remedy of equal efficiency in the same direction is cracked wheat—that is, common white wheat grains, broken in two or three pieces, and then boiled until it is as soft as rice, and eaten mainly at two meals of the day with butter or molasses.

Common sweet cider, boiled down to one-half, make a most excellent syrup for coughs and colds, for children—is pleasant to the taste, and will keep throughout the year in a cold cellar.

In recovering from an illness, the system has a craving for some pleasant acid drink. This is found in cider, which is placed on the fire as made, and allowed to come to a boil, then cooled, put in casks, and kept in a cool cellar. Treated thus, it remains for many months as good as the day it was made.

We once saved the life of an infant which had been inadvertently drugged with laudanum, and was fast sinking into the sleep from which was no wakening, by giving it strong coffee cleared with the white of an egg, a teaspoonful every five minutes, until it ceased to seem drowsy.

**TO REMOVE PAINT AND PUTTY FROM WINDOW GLASS.**—Put sufficient pearl ash into hot water to make it very strong of it; then saturate the paint which is daubed on the glass with it. Let it remain till nearly dry, then rub it off hard, with a woollen cloth. Pearl ash water is also good to remove putty before it is dried on the glass. If it dries on, whitening is good to remove it.



## DOMESTIC RECIPES.

**MINT SAUCE FOR ROAST LAMB.**—Pick the leaves off the stalks; wash and dry them careful; chop them with a sharp knife very quickly to preserve their green color; put it into a boat; add sufficient vinegar to make it liquid and powdered sugar to take off the acidity of the vinegar.

**SAUCE FOR RUMP STEAK.**—Take equal parts of ale, red wine and catsup, a piece of butter, and a little pepper, with a teaspoonfull of garlic vinegar; stir these over the fire in a small saucepan, and pour it very hot upon the steak. It will form a pleasant addition to the gravy of any roast meat, and can be made in a few minutes.

**APPLE SAUCE.**—Pare, core, and slice some apples, and put them in a stone jar, into a saucepan of water, or on a hot hearth. If on a hearth, let a spoonful or two of water be put in to keep them from burning. When they are done, bruise them to a mash, and put to them a piece of butter the size of a nutmeg, and a little brown sugar if required; but it destroys the slight acid flavor of the apples, and its corrective to goose and pork.

**BREAD CHEESECAKES.**—Slice a penny loaf as thin as possible; pour on it a pint of boiling cream; when well soaked, beat it very fine; add eight eggs, half a pound of butter, a grated nutmeg, half a pound of currants, a spoonfull of brandy or white wine; beat them up well together, and bake in raised crusts or pattypans.

**PARSNIPS.**—Slice them rather thin lengthwise, and cook in just water enough to cook them until tender—two hours generally, though there is great difference in parsnips cooking tender. (I have never cooked any too much.) Then add salt to taste and cream.

**CARROTS.**—These may be cooked in the same way. I slice them the other way, because they are prettier. Or they may be cooked tender and chopped fine and seasoned with cream and salt to taste.

**RTA-BAGAS.**—Cook till tender, chop fine and season with cream and salt to taste.

**CABBAGE AND CAULIFLOWER.**—Cut up quite fine, cook in as little water as will cook them, season with salt and cream.

**ASPARAGUS.**—Cook the same. If cream cannot be had, butter will answer, but cream is better always. Never put vegetables cooking in any but boiling water, and keep them cooking all the time.

**VEGETABLE OYSTERS.**—Or salsify, makes a most excellent dish. Slice them fine after scraping off the skin, and boil them at least two hours. Then add ingredients the same as for oyster soup.

**SPICE FOR CHOPS AND GRAVY.**—Three drachms of ginger, ditto black pepper, ditto cinnamon, seven cloves, half ounce mace, one fourth ounce cayenne, one ounce nutmeg (grated), one and one-fourth ounce white pepper. Mix well, bottle, and keep dry.

**\$1,000 REWARD** is offered by the proprietor of Dr. Pierce's Alt. Ext. or Golden Medical Discovery for a medicine that will equal it in the cure of all diseases for which it is recommended. For Bronchitis severe Coughs, and the early stages of Consumption, it has astonished the medical faculty by its wonderful cures, and hundreds of the best physicians pronounce it the greatest medical discovery of the age. While it cures the severest coughs, it strengthens the system and purifies the blood. For loss of appetite, indigestion, dyspepsia, "Liver Complaint" or "Biliousness," and constipation of the bowels, it surpasses all other known medicines. Sold by druggists.

When everything else has failed, don't despair until you have tried Dr. Sage's Catarrh Remedy.

**PEANUT CULTURE.**—C. H. LATHAM, Craven Co., Pa., writes the *Country Gentleman*:—"The usual mode of cultivation here is as follows: We check our land off twenty-four to thirty inches; plant two kernels in each check and cultivate both ways. We find lime in moderation to be the best fertilizer. It should be evenly spread and harrowed in before checking off. Apply a shovelful of barn-yard manure to each hill and cover lightly the depth usual to corn. We cultivate them flat, not hill or ridges. Keep them free from weeds and work them until the vines commence to spread, and the peas to form in the ground; at this time the crops should be clean—then leave them to manure. They will soon cover the ground. Plant last of April to 10th of May. Seed can be had at two dollars and fifty cents per bushel, at Newbern or Wilmington, N. C. Large planters put the whole pea (shell and all) in the check; but when five or ten acres are planted, we shell them, and put two to four kernels in the hill. It takes longer for them to come up when planted whole."

**WASH THE TREES.**—It is a good time to scrape and wash the trees—washing alone will do if scraping was done last autumn, as it should have been.—There is nothing like whale-oil soap and water for this purpose, in the proportion of a pound of soap to a bucket of water, say four gallons. This well applied with a stiff broom or brush will dislodge all the vermin concealed in the bark, crevices, &c., but it will have no effect upon the curculio however strong it may be. We have found it to be death to every other insect, and has an invigorating effect upon the tree itself.

This application, made only half as strong as above, sprinkled over rose-bushes, will destroy all the enemies infesting this princess of flowers.—*Germantown Telegraph*.

**MOWING LAWNS.**—The editor of *Germantown Telegraph* gives the following advice as to lawns: It should be remembered that the first mowing of lawns ought to be done as soon as the grass gets three or four inches high. It adds greatly to the velvety appearance and beauty of the lawn. If the grass is left until it grows eight, ten or twelve inches high, the roots become somewhat exhausted, bare and yellow spots are to be seen, and this takes sometimes a whole season to recover. In a word, the oftener lawns are mown the more permanent they become and the more attractive they appear. All lawns, before the grass begins to grow, should be thoroughly rolled just after a rain when the sward is soft and impressible.

Raw, mellow apples are digested in an hour and a half, while boiled cabbage requires five hours. The most healthful dessert that can be placed upon the table is a baked apple.

**BLEACHING COMPOUND.**—Many persons keep on hand a supply of Javelle water, small quantities of which are sufficient to render most soiled linen perfectly white. This is prepared by taking four pounds of sal soda to one pound of chloride of lime in one gallon of water.

Put the sal soda into a vessel over the fire, add one gallon of boiling water; let it boil for 10 or 15 minutes, then add the chloride of lime by throwing it free from lumps into the soda water. When cold, pour into a jug or large bottle and cork tightly.—Where it is desirable to have a larger quantity the following mixture can be taken:

Stir 5 pounds of chloride of lime into two pails of warm water; dissolve 10 pounds of glauber salt, (sulphate of soda,) in 1 pail of water; also 4 pounds of sal soda in 1 pail of water. The contents of the four pails can be poured together, and kept in any suitable tight vessel. Such a quantity as the above ought to last a long time, as a dipper full of it would bleach a large quantity of linen or other goods. The materials are cheap and the mixture easily made.—*Journal of Applied Chemistry.*

**ABOUT GERANIUMS.**—A lady correspondent of the *Country Gentleman* says: With regard to Zonale or Horse-shoe geraniums, I prefer Tom Thumb varieties on account of their compact growth, bushy heads, and full clusters of flowers. Tom Thumb White, or Lady Mary, is of snowy whiteness with red anthers, and is my favorite. Gen Grant ranks highest among the larger kinds; its clusters are enormous. I have counted from sixty to seventy buds on one cluster. Princess Litchtenstien is a salmon pink with white eye, of Tom Thumb growth. Dr. Lindley, another lilliputian, has orange scarlet flowers, with a white centre. Scarlet Tom Thumb is very dazzling in color, Herald of Spring is a cherry rose, very beautiful. Emperor of the French has a bright, large scarlet flower, grows to immense size in open ground. Christine; a rosy pink, is quite charming.

**CHANGE OF SOIL FOR FLOWERS.**—Says the *Gardeners' Monthly*: If flowers have been growing in the ground many years, new soil does wonders. Rich manure makes flowers grow, but they do not always flower well with vigorous growth. If new soil cannot be had, a wheelbarrow of manure to about every fifty square feet will be enough. If the garden earth looks gray or yellow, rotten leaves—quite rotten leaves—will improve it. If heavy, add sand. If very sandy, add salt—about half a pint to fifty square feet. If very black or rich from the previous years' manurings, use a little lime, about a pint, slacked, to fifty square feet.

The *Maryland Farmer* \$1.50 per annum.

**How to KEEP EGGS.**—As frequent inquiries are made in your paper as to the best method of keeping eggs, I will send one which we have used several years with success.

Take a lump of quick lime as large as a quart measure; slake it in a common water pail; dissolve half a pint of coarse salt and add to it—then fill the pail with water, and let it stand till entirely settled—then pour the clear liquid over the eggs, which must be set on the small end, in a jar or tub, after having been minutely examined to see that none are cracked. Eggs put up in this way last May, are perfectly fresh now.

The eggs can be held in place by a plate or bit of slate laid on them before pouring on the lime water.

**WHAT OF PEAS.**—Why, just this, that of all the early sorts there is no one equal in all respects, of extra earliness, productiveness and quality, to Carter's first crop. Then comes Waite's Caractacus and then McLean's Advance, which is a wrinkled sort and reminds of the rich juiciness yet stored up in Laxton's Prolific Long-Pod, Champion of England, and Waite's King of Marrows, all which follow each other in succession of maturity provided they are all sown the same day, and in the same soil treated alike.—*Journal of Agriculture.*

**GRAFTING WAX.**—Take good, clean beeswax, one-third; rosin, two-thirds; melt together: boil one hour, then pour it into cold water. When cold enough work it with the hands until you think it well mixed. If not soft enough to spread easy add a little more wax.—*Cincinnati Gazette.*

**MAKE YOUR TREES BRANCH LOW.**—Train your pear trees for garden or even field use, so that they will branch at a distance of one to two feet from the ground. The advantages are easily enumerated by the *Horticulturist*:

- 1st.—It is easy to trim.
- 2d.—It is easy to gather the fruit.
- 3d.—Falling fruit is little injured.
- 4th.—All branches being sturdy, will not be strained by over-bearing or over-weight of fruit.
- 5th.—Soil will be kept shaded and moist.
- 6th.—Trunk will be protected from the scorching sun.
- 7th.—Tree will grow more and more beautiful.

**MAKE YOUR OWN CANDLES.**—Take two pounds of alum for every ten pounds of tallow; dissolve in warm water before the tallow is put in; then melt the tallow in the alum water with frequent stirring. This will clarify and harden the tallow so as to make a most beautiful article, either for summer or winter use, almost as good as sperm.